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Predicting the frequency of teacher-selected behavioral interventions from clusters of teacher reported student problem behaviors

Shafer, Timothy B., Ph.D.

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U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

PREDICTING THE FREQUENCY OF TEACHER SELECTED BEHAVIORAL INTERVENTIONS FROM CLUSTERS OF TEACHER REPORTED STUDENT PROBLEM BEHAVIORS

by

Timothy B. Shafer

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DISSERTATION TITLE

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Timothy B. Shafer

SUPERVISORY COMMITTEE:

	APPROVED	DATE
Signature	Reece L Peterson	11-2-93
Typed Name	Reece L. Peterson	
Signature	Donald F. Uerling	11-2-93
Typed Name	Donald F. Uerling	
Signature	Stan Vasa	11-2-93
Typed Name	Stan Vasa	
Signature	Jane Close Conoley	11-2-93
Typed Name	Jane Close Conoley	
Signature		
Typed Name		
Signature		
Typed Name		

GRADUATE COLLEGE
UNIVERSITY OF NEBRASKA

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Timothy B. Shafer, Ph. D.

University of Nebraska, 1993

Advisor: Reece L. Peterson

This exploratory study investigated the frequency of regular education teacher selected behavioral interventions and clusters of student problem behaviors. The frequency of teacher selected behavioral interventions was determined by teacher self-report using a newly devised survey instrument which clustered behavioral interventions into five factors. These five factors were: Factor I, Redirection; Factor II, Consultation; Factor III, Manipulation of Material Reward; Factor IV, Removal from Classroom; and Factor VI, Alter the Classroom Physical Environment. Means were provided to determine the frequency of intervention. Student problem behaviors were clustered using a well researched and well established behavior rating scale which established three clusters of problem behavior. The three clusters of problem behavior were Internalizing Problems, Externalizing Problems, and Total Problems. T-scores were used to report the problem behavior score. The data for this project was a part of an existing data base from a three-year federally funded research project

The study investigated two aspects of these variables. The first aspect determined correlations that exist between the intervention factors and the clusters of problem behavior. The second component investigated the predictive nature of interventions based on clusters of behaviors.

Findings of the study suggest that, in general, a low positive correlation exists between student problem behaviors and teacher intervention factors. Low positive correlations were established for at least one problem behavior cluster

and four of the five intervention factors. A full-model regression indicated that in isolation, the problem behavior clusters did not predict interventions. However, the three problem behavior clusters treated as one variable did predict interventions in four of five factors.

The findings suggest that teachers do not apply specific types of interventions to specific types of problem student behavior. Yet two general statements may be made: Teachers redirect most often and do it for aggressive behaviors. Also, teachers do not use material rewards for any problem student behaviors.

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Chapter One: Introduction

Context of the Problem

This exploratory study examines the frequency with which teachers report they apply specific behavioral interventions to misbehaving students in their classrooms. Inappropriate student behavior is a powerful influence on classroom instruction and is a documented teacher concern. Opinion polls reported in the popular and scholarly press have contributed to the sense that inappropriate student behavior is a major cause of the problems faced by the educational system.

To illustrate this concern, a national survey to determine the condition of the public schools asked teachers "...what is the biggest problem facing schools?" In this poll, discipline problems were identified by 49 percent of the responding teachers as a very serious or fairly serious problem (Gallup and Elam, 1984). In another survey of teachers, the National Education Association (NEA) found that over 90 percent of its responding membership indicated that student misbehavior interfered with teaching. About one in five of these same respondents indicated that inappropriate behavior interfered to a great extent with teaching (Opinion Poll, 1979).

Teachers are not the only ones who perceive inappropriate behavior as a problem in the schools. Phi Delta Kappa sponsors a random annual survey of American households asking participants to respond to statements about educational issues. A perennial uppermost problem identified in this survey of American homes is the lack of discipline in the public schools (Elam, Rose, & Gallup, 1992).

Whether called inappropriate behavior, misbehavior, or "the lack of discipline" (Elam, Rose, & Gallup, 1992, p. 43), all indicators point to a wide

range of such student behaviors as problematic in the schools. Student behaviors range from the mere refusal to do as instructed by the teacher to physical violence against property and person. Media headlines report student violence against teachers and other students, drug abuse by school age students, gang related activities, and weapon problems. Charles (1989) suggests that behavior is "... all the physical and mental acts that humans perform" (p. 2).

Although Charles (1989) combines all that humans do and think into the realm of behavior, this inclusive definition does not delineate between appropriate and inappropriate behavior. Charles further offers that the appropriateness of behavior is defined by the context in which the behavior occurs. Behavior appropriate in one setting may be entirely inappropriate for another setting.

Since problem behavior is dependent on the context in which the behavior occurs, it is not easily quantified for scientific investigation. A common method of quantifying behavior for investigation is by establishing behavior categories. Categorizing student actions into identifiable clusters or groups of behavior is an accepted practice in the study of inappropriate or dysfunctional behavior. Although no one standard has been accepted by the entire research or treatment community, two models have evolved--the clinical model and the empirical model. The clinical model relies on the judgment of highly trained professionals to assess subject behaviors and assign appropriate behavior classification. This model uses few empirically derived assessment devices to classify behaviors (Gresham, 1985). Empirically derived classification systems use statistical procedures to determine profiles of behavior. These profiles are normally determined through data acquired

from behavior checklists or scales that have a listing of problem behaviors (Gresham, 1985).

A number of devices exist that quantify problem behavior. There are two generic types of devices that assist in the development of behavior profiles. These two types are behavior rating scales and behavior checklists. Behavior scales ask the rater to assign a degree of behavior severity to the behavior, and checklists ask the rater to note whether or not the behavior occurs. Examples of these are the Behavior Dimensions Rating Scale (Bullock & Wilson, 1989), Burks' Behavior Rating Scales (Burks, 1968-77), Conners' Rating Scales (Conners, 1989), Forms for Behavior Analysis with Children (Cautela, Cautela, & Esonis, 1983), and the Revised Behavior Problem Checklist (Quay & Peterson, 1979-87).

Achenbach and Edelbrock also developed an empirically derived assessment device, the Child Behavior Checklist (1981), to assess such behavioral clusters. The Child Behavior Checklist is a rigorously researched and widely-used device assigning inappropriate behaviors to treatment or research clusters called externalizing and internalizing. Refer to the definitions sections later in this chapter for a more complete discussion of externalizing and internalizing.

A series of Achenbach and Edelbrock checklist instruments survey the behavior of a specific child from various perspectives. Parents, teachers, impartial observers, and/or the identified child may complete a checklist designed to assess the degree to which inappropriate behavior is demonstrated from the perspective of that person. Each form of the Child Behavior Checklist compares the identified student against a normative population of children.

Interventions

Overall, interventions represent both the effort to strengthen presently occurring appropriate behavior, and the effort to replace inappropriate student behavior with more appropriate behavior. As reported by Long and Newman (1980), Redl suggested that to strengthen or replace behavior, an interventionist has available a four-step approach. These four steps represent a continuum of intervention aggressiveness. The four options in the continuum are permitting behavior, tolerating behavior, interfering with behavior, and preventive planning. The four steps of the continuum are briefly presented below, and will be discussed more thoroughly in Chapter Two.

Permitting behavior allows a subject to learn from practice in social settings what behaviors are allowable and appropriate. This step on the continuum is designed to strengthen appropriate behaviors; no attempt is made here to change inappropriate behaviors. Permitting behavior is a necessary component to learning what behaviors are not allowable and are inappropriate (Long & Newman, 1980).

Tolerating behavior is the next step in the continuum. Tolerating behavior has the interventionist establishing rules, informing the subjects of what is incorrect or unacceptable behavior, but allowing the subject some tolerance for rule violation. Long and Newman (1980) suggest that some students need practice in erring and will learn from these mistakes with minimal teacher intervention.

Interfering with behavior is the third level in the continuum. Conceptually, interfering with behavior is most commonly associated with interventions, as may be determined from the actual definition of intervention. When an interventionist interferes with a subject's behavior, specific

intervention techniques are applied to the subject to interfere with the inappropriate behavior (Long & Newman, 1980).

The final step is preventive planning. The preventive planning step involves analysis by the interventionist. The interventionist may need to examine the context for inappropriate behavior, seeking ways to structure the setting so that the subject is not induced into the problem behaviors (Long & Newman, 1980).

One aspect of interventions that is critical for the ultimate success of any intervention is the identification of the behavior to be changed. This identification of the behavior to be changed is known as identifying the target behavior. Without accurate identification of target behaviors, any interventionist will have difficulty changing the behavior because the expected outcome of the intervention is unclear.

Although student behavior change is possible with application of appropriate interventions, a body of research exists which suggests that teachers do not utilize the interventions that are available. Research has shown that some interventions viewed as highly effective are judged unacceptable by teachers and therefore are not employed (Turco, Witt, & Elliott, 1985). Another study found that as years of teaching experience increase, teachers find fewer interventions acceptable, resulting in a narrowing of potential intervention options from which to select (Witt, Moe, Gutkin, & Andrews, 1984).

The research that has been conducted on interventions include: intervention acceptability (Witt & Martens, 1983; Witt, Moe, Gutkin, & Andrews, 1984; Wood & Hill, 1983; and Elliott, Witt, Galvin, & Peterson, 1984), intervention efficacy (Witt & Elliott, 1982; Witt, Hannafin, & Martens, 1983; and

Martens, Peterson, Witt, & Cirone, 1986), and intervention frequency of use (Wood & Hill 1983; Brazil, No date; and Martens, Peterson, Witt, & Cirone, 1986). A common element of the available research is that teacher judgments of interventions were based on hypothetical scenarios or past experience. A surprising paucity of work has been performed to determine relationships between the behaviors of specific students and the interventions used by teachers to address those behaviors.

Summary

Inappropriate student behavior disrupts the instructional process and is perceived to be a problem by teachers and the public alike. Troublesome behaviors are those misbehaviors that range from seemingly inconsequential, annoying behaviors to more sensational behaviors.

A variety of interventions are available to teachers wishing to alter student misbehavior, although the rate of intervention usage indicates that some applicable interventions are underutilized by teachers. Evidence suggests that teachers implement a narrow range of possible interventions to the broad spectrum of problem misbehaviors (e.g. Witt, Moe, Gutkin, & Andrews, 1984). Research has focused on intervention acceptability, efficacy, and frequency. Although it seems potentially valuable, little research has been conducted which attempts to match specific student behaviors with teachers' use of specific interventions.

For the purposes of this study, interventions are actions taken by teachers to alter the outcomes of inappropriate behavior patterns, to change inappropriate behavior. This study focuses on the third and fourth steps of the continuum described by Long and Newman: interfering with behavior and preventive planning. Examples of such interventions are verbal interventions

(e.g. appealing to students or reminding of rules), behavioral (e.g. use of tokens or other reinforcers), or changing the environment to prevent inappropriate behavior (e.g. changing seating arrangement).

Statement of the Problem

There is no readily available information regarding the frequency with which teachers indicate that they apply interventions to specific empirical classifications of problem behavior. It is not known whether teachers tend to apply certain behavioral interventions to children demonstrating specific behavioral characteristics.

Purpose of the Study

This exploratory study has two purposes. First, this study will explore the relationship between student behavior and the frequency with which teachers report using specific interventions. Second, this study will attempt to determine if there are particular patterns of interventions used for specific types of student behavior.

Research Questions

In order to accomplish the stated purpose of this project, the following specific research questions will be addressed:

Question 1

What is the relationship between student behavior and the frequency with which classroom teachers indicate that they employ certain interventions factors?

Question 2

Is it possible to determine a pattern of teacher implemented interventions based on specific clusters of student behavior?

Procedures

A complete description of the research procedures followed in this study are presented in Chapter Three. A brief overview is presented here.

The data for this study were gathered in the course of a federally funded research project conducted at the University of Nebraska-Lincoln. This three-year project was known as the Behavior Disorders Research Project (BDRP) (Conoley & Peterson, 1986). The purpose of the BDRP was to study the services children with behavioral disorders and learning disabilities receive in school. Although not of interest in this study, the BDRP also examined the concordance between the school and mental health diagnostic systems.

At the start of this larger study, target students were all fifth through ninth graders in schools within a 100 mile radius of Lincoln, Nebraska. A variety of instruments were utilized to gather the data on the sample students to achieve the aims of BDRP. The teachers surveyed in this larger study were special education and regular education teachers serving the target students. Both rural and urban settings in southeast Nebraska were included in the study.

The present study is based on a subset of the data gathered as a part of the larger project. This subset includes those students and their regular education teachers for whom data were gathered on student behavior and teacher interventions. It is important to note that although the students were the target subjects of the larger study, it is the teachers of these students who are the target subjects in the present investigation.

Of the many instruments used to gather data in the larger study, two will be used in this current study. The student behavior groupings will be established by the Child Behavior Checklist - Teacher Report Form (CBC-

TRF) (Achenbach & Edelbrock, 1985). The CBC-TRF is a well researched and documented behavior rating scale that provides broad- and narrow-band scores designed to indicate student problem areas. Teacher intervention factors will be established by the BDRP Intervention Survey (Conoley & Peterson, 1986). The BDRP Intervention Survey is a derivation of a previously developed profile, the Classroom Intervention Profile (Martens, Peterson, Witt, & Cirone, 1986), designed to determine the frequency of teacher behavioral interventions. Each of these instruments are discussed briefly below.

The teacher version of the Child Behavior Checklist (CBC-TRF) (Achenbach & Edelbrock, 1985) was selected for this project so that direct correlations and predictions could be established with the frequencies established by the BDRP intervention survey. The parent reports from the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1981) or the student report from the Child Behavior Checklist Youth Self Report (YSR) (Achenbach & Edelbrock, 1986) could have been used because each provide similar broad- and narrow- band scores. However, by establishing the scores used in this study from the same perspective, namely that of teachers, it follows that data credibility is enhanced.

The potential variables for this study include the CBC-TRF T-scores and the frequency of teacher behavioral interventions. The T-score variables for this study will be the Internalizing normalized T-score, the Externalizing normalized T-score, and the Total Problem normalized T-score from the CBC-TRF (Achenbach & Edelbrock, 1985) for regular classroom teachers serving the students. The CBC-TRF is a behavior rating instrument that provides to its user an empirical picture of the behavioral strengths and weaknesses of a particular child. The CBC-TRF form provides a method for determining the

relative standing of a specific child against a normative sample of non-referred children. The scores reported by these checklists are reported in terms of Externalizing broad-band, Internalizing broad-band, and Total Problems scores.

The frequency variables for this study will be the frequency with which teachers report that they employ certain interventions as grouped into intervention factors for specific target students. The frequency with which teachers report that they employ certain interventions will be identified by the BDRP Intervention Survey (Conoley & Peterson, 1986). The BDRP Intervention Survey is based on the Classroom Intervention Profile (Martens, Peterson, Witt, & Cirone, 1986) and asks teachers to provide a report of how frequently they implement 24 interventions with a targeted student.

Based on a previous factor analysis, the 24 specific intervention items were clustered into one of six intervention factors. These factors are: Factor I, Redirection; Factor II, Consultation; Factor III, Manipulation of material reward; Factor IV, Removal from the classroom; and Factor VI, Alter classroom physical environment. As is explained in Chapter Three, Factor V, Time-out in the classroom, was not incorporated into the BDRP Intervention Survey from the Classroom Intervention Profile. The BDRP Intervention Survey used the items forming these five factors from the Classroom Intervention Profile. These five factors are the measures of intervention usage for the present study.

Additional descriptive variables will be reported for the target student and teachers. These descriptive variables will include student gender, student disability label, student socioeconomic status, teacher gender, teacher level of education, and teacher years of teaching experience.

Definition of Terms

BDRP

Behavior Disorders Research Project

CBC

Child Behavior Checklist

CBC-TRF

Child Behavior Checklist-Teacher Report Form

Factor I. Redirect

Redirection: Cluster of items from the BDRP Intervention Survey that have the common element of teachers intervening in inappropriate behavior by attempting to refocus student behavior on more appropriate activities.

Factor II. Consult

Consultation: Cluster of items from the BDRP Intervention Survey that have the common element of the reporting teachers referring the inappropriately behaving student to others with specialized skills to reduce inappropriate behavior and/or increase appropriate behavior.

Factor III. Manipulate

Manipulation of Material Reward: Cluster of items from the BDRP Intervention Survey that have the common element of the reporting teachers using the various behavior techniques involving tangible reinforcers to reduce inappropriate behavior and/or increase appropriate behavior.

Factor IV. Remove

Removal from the Classroom: Cluster of items from the BDRP Intervention Survey that have the common element of the reporting teachers removing a target student displaying inappropriate behavior from the main classroom activity.

Factor VI. Alter

Alter the Classroom Environment: Cluster of items from the BDRP Intervention Survey that have the common element of the reporting teachers making arrangements to the classroom environment in the attempt to discourage inappropriate behavior of the target student.

Externalizing Behavior

Externalizing behavior is characteristic of "...aggressive, antisocial, [and] undercontrolled..." behavior (Achenbach & Edelbrock, 1983, p. 31)

Internalizing Behavior

Internalizing behavior is characteristic of "...fearful, inhibited, [and] overcontrolled..." behavior (Achenbach & Edelbrock, 1983, p. 31).

Total Problems

Achenbach and Edelbrock suggest that the dichotomy of externalizing behavior and internalizing behavior "are not mutually exclusive" (1986, p. 29). Therefore, a total problems score is derived to indicate clinical significance of overall problem behavior.

Teacher Interventions

Teacher interventions are the specific activities or actions of a teacher to change student behavior.

Teacher Intervention Factors

Teacher intervention factors are descriptive clusters of specific interventions that teachers may use in the classroom to change student behavior.

Assumptions

1. The rating scales used by teachers to categorize student behaviors are valid and reliable instruments.

2. The self-report instrument used by teachers to measure their intervention frequency for specific students is a valid and reliable instrument.

Delimitations and Limitations

1. The teachers in this study are restricted to the school districts in southeast Nebraska within a 100 mile radius of Lincoln, Nebraska. Results of this study may be generalized to areas with similar characteristics.
2. The teachers in this study may not be representative of teachers in similar teaching assignments.

Significance of the Study

This exploratory study will provide important information to educational researchers interested in student behavior. Inappropriate student behavior is acknowledged as a disruptive influence to classroom instruction. A contribution to knowledge that focuses on the relationship between what a specific student does and the response of that student's teacher may lead to a better understanding regarding the selection of interventions.

If the likelihood of the use of specific interventions can be assessed for identified behavior factors, implications exist for future research. Without an exploratory investigation into these relationships, no understanding of the relationships between student inappropriate behavior and repeated teacher interventions is likely to develop. As this work is an exploratory study further confirmatory research would be needed to verify the findings of the present study.

As discussed above, most studies have investigated the acceptability, efficacy, and frequency of use of interventions. These studies have largely

been of a hypothetical, case study method. This exploratory study proposes to investigate selected components of the previous research and add a unique element--eliminating the hypothetical component of current research and replacing it with the behavior of specific students. Potentially, this study could open a unique area in intervention research. If it is demonstrated that meaningful intervention information may be determined using actual student data, as is the premise of this study, the potential for future research may expand in several directions.

As this is an exploratory study, strong indicators only warrant additional investigation. However, if strong or predictable relationships between student behavior and the frequency of teacher interventions can be established, the logic of intervention use will be supported. In other words, if specific student behaviors result in teachers applying specific interventions, support is given to the practice of intervening with student problem behaviors.

Conversely, it is possible that no relationship between student behavior and the frequency of teacher interventions may be determined. Should this be the case, continued research in this area could still be a potential area of rich research. If no relation exists between student behavior and the frequency of teacher interventions, one might question the overall logic of interventions, how interventions are selected, or the efficacy of intervention training. In the event of negative findings, replication of this study would be in order to confirm the negative results. After replication research supporting a finding of no relationship between student behavior and the frequency of teacher interventions, research investigating other variables not included in this study could be examined.

If relationships are established, additional research would serve to

confirm or challenge the results of this study. If confirmed, frequency of intervention use research may be expanded into a larger sample of identified students. Other options that may be considered could be to conduct similar methodology in different geographical areas, such as coastal areas or heavily industrialized areas. Of additional interest would be research in inner-city, urban, or suburban localities. Also, as this study examined the frequency of interventions, future research might examine the other two areas identified in intervention research--acceptability and efficacy. The potential now exists to examine the acceptability and efficacy of interventions with actual students instead of using the hypothetical cases as used in existing research.

Extending the research possibilities even further, at some point researchers may choose to examine the relationship between hypothetical case study and actual subject study format. The research potential for this type of study might allow for some type of index based upon correlations between any future hypothetical research and samples of actual students. If some determination may be calculated regarding the two types of research, researchers may have reliable options in designing methodology utilizing cost efficient elements of design.

Although an exploratory study, this research could also contribute to the preservice and inservice training of teachers and administrators. Conceptually, it would be helpful for both prospective and current teachers and administrators to know that identifiable student behaviors are related to certain groupings of teacher interventions.

Chapter Two: Literature Review

Introduction

In order to investigate the relationship between inappropriate student behavior and the frequency of teacher intervention selection, it is necessary to review four areas of relevant literature. The four areas of this review will establish the concept of inappropriate behavior, review two major categories of inappropriate behavior, present interventionist considerations in designing behavioral interventions for inappropriate behaviors, and review selected behavioral intervention research.

Conceptualizing Inappropriate Behavior

Charles (1989) defines behavior as "...all the physical and mental acts that humans perform" (p. 2). Under this definition, behavior includes all acts performed by an individual. According to Charles, the delineation between appropriate behavior and inappropriate behavior is the condition under which the target behavior occurs. Under this premise, behavior that is appropriate in one setting may be inappropriate in another setting. Generally, appropriate behavior occurs under conditions that define the behavior as appropriate, and inappropriate behavior is behavior engaged under conditions that define the behavior as inappropriate. Inappropriate behavior, then, is behavior inconsistent with "... setting and situation ..." (p. 2) and must be determined subjectively by the teacher . Charles would seem to suggest that behavior appropriateness or inappropriateness is a function of the setting.

Skinner (1966) also addressed this issue of defining behavior by its context. Skinner is well known for his work in operant behavior theory, the theory that states that behavior is the result of the antecedents and consequences of any specific behavior. Skinner determined that the subject's

behavior must be considered as a function of the behavior purpose and this purpose should be determined contextually. The actual behavioral act, whether appropriate or inappropriate to observers, is not the sole basis on which to judge behavior. Rather, the purpose of a behavior should be used to determine appropriateness and these purposes of behavior are established by the situation, or context, in which the target subject is found.

While Skinner (1966) and Charles (1989) appear to agree that behavior is more than a specific behavioral act, there is a distinct difference in their work. Skinner and Charles would agree that the behavior of the hiccup is the target behavior and both would agree it necessary to determine the behavior appropriate or inappropriate. However, each would emphasize different aspects of the problem.

Charles (1989) appears to concur with Skinner (1966) in that inappropriate behavior is more than a specific act. Both would seem to suggest that the difficulty of establishing inappropriate behavior is not necessarily connected to the specificity of the behavior. Charles demonstrates this use of context in determining the appropriateness of behavior by presenting a vignette of a student hiccuping in class. A student who hiccups unintentionally during seat work is not considered misbehaving. However, a student who deliberately hiccups in order to gain attention or disrupt the lesson is behaving inappropriately.

Charles (1989) contends that the contextual purposes of behavior must be determined subjectively. While Skinner would scientifically evaluate the contextual purpose teachers in a classroom with many children, each engaged in separate behavioral acts, will not have the controlled conditions available to an operant behaviorist to make such a scientific evaluation. Therefore,

teachers must rely on their judgment to determine the purpose of the behavior and subsequently establish the appropriateness or inappropriateness of a behavior.

Overall, the systematic assessment of the purposes of behavior, as suggested by Skinner (1966), is a somewhat convoluted and impractical process for educators. Therefore, Charles (1989) appears to promote the subjective, intuitive interpretation of the purpose--a much more manageable approach for educators. Educators in the classroom, with specific curricular goals and limited time, are concerned with the change in inappropriate behavior, or the prevention of inappropriate behavior, as opposed to scientific investigation of the purposes of behavior. However different the framework established by Skinner and Charles, the important point is that behavior is composed of, and determined by, factors other than a specific behavioral act.

MacMillan, Forness, and Trumbull (1973) seem to find a middle ground in this discussion. As Charles (1989) and Skinner (1966), MacMillan et al. also discuss the situational aspect of behavior. However, MacMillan et al. examine the connection between behavior and context through discussion of interventions. As Skinner focuses on the purpose of a behavior and Charles looks at the subjective assessment of behavior, MacMillan et al. examine the contextual issues of the interventions used to change behavior.

Generally, MacMillan et al. suggest that because anticipated inappropriate behavior change is predicated on the success of the intervention, a discussion of behavior and interventions are logically connected. As behavior may be driven by a specific purpose and may or may not be appropriate depending on context, the intervention designed to change the behavior must be also bound by context. Specifically, MacMillan et al.

write that the success of an intervention "depends...on the nature of the behavior...and the context of the situation." (p. 85).

Categorizing Inappropriate Behavior

Because behavior, and by extension inappropriate behavior, may take many forms, considerable effort has been taken towards categorizing student actions into identifiable behavior clusters or groups. These efforts at grouping have been based upon frequently occurring, and similar, behaviors. Though no one standard of categorization has been proposed and subsequently accepted by the professional community, these attempts to develop a descriptive scheme of behavioral categorization have provided some guidance in scholarly discussion and research. According to Gresham (1985), these schemes take two paths--the clinically derived and the empirically derived methods.

These separate and dissimilar methods for categorizing inappropriate behavior reflect two discrete professions that work with children--the psychological and the educational professions. Each profession has its own approach based on distinct philosophies regarding the remediation of inappropriate behavior (Gresham, 1985). Although the clinical method of interventions is not emphasized in this report, for the purposes of contrast and to provide some indication of the problems confronting child behavior professionals, some discussion of the clinical method is presented here.

Clinical Method

The most widely used clinically derived model used in the United States is based on a psychological perspective and is described in the Diagnostic and Statistical Manual of Mental Disorders (3rd Edition Revised) (DSM IIIR), (American Psychological Association [APA], 1987). The DSM IIIR is used

extensively by the psychiatric community in identification and categorization of individuals in need of treatment in a clinical environment. The professional identifying inappropriate behavior by using this method must be highly trained in the practice of observation and in the use of the DSM IIIR.

The Diagnostic and Statistical Manual of Mental Disorders III (3rd edition, Revised) (DSM III-R) (APA, 1987) is, as was its predecessors, the standard for clinical categorization of behavior. The DSM III-R provides an extensive clinical classification scheme based on the collective observations of trained professionals (Gresham, 1985). Direct support for Gresham's contention of clinical classification basis, the Diagnostic and Statistical Manual of Mental Disorders III (APA, 1981) states, "It should be understood, however, that for most of the categories the diagnostic criteria are based on clinical judgment..." (p. 8). The problem with the clinical model is that "...it relies heavily upon a medical model of abnormal behavior" (Gresham, 1985, p. 497).

The medical model presents serious problems for educational professionals. The medical model determines a symptomatology scheme, based on observation to diagnose the presenting problem in terms of etiology and prescribed intervention (Gresham, 1985). Teachers, however, are trained in the processes of curricular instruction. Teachers receive instruction and practice in the methods necessary for the cognitive development of students. The typical training program for teachers does not provide much, if any, training for the necessary components of observation, diagnosis, etiology, and clinical intervention.

An additional problem with the clinical model is that the study of psychopathology largely focuses on adults (Achenbach, 1978). Achenbach questions this clinical focus on adult pathology. He raises the issue assessing

the psychological state of a child against the overwhelmingly adult centered clinical model. The child is in a developmental sequence that is unlike the developed personality of adults. Achenbach suggests that the appropriate method for evaluating children's problems is the interference these problems pose for the child's future emotional development.

Empirical Method

The empirical method is based on categories established by statistical methodologies and is used extensively in schools and classrooms. The strength of the empirical method lies in its standardized format. Raters of a student's inappropriate behavior need not be highly trained in observation, nor in the use of the protocol on which the observations are recorded. They only need to have the opportunity for observation, such as that of the normal classroom experience. Also, rating scales are less costly and more reliable than assessments developed from the clinical interviews (Edelbrock, 1983).

The advantage of empirical scales is that they typically do not require any specific training by the person completing the checklist. Following the completion of the checklist by the rater, the investigator uses tables derived from statistical procedures to reduce the many individual behaviors rated on the form into clusters or factors. The tables used to reduce the many individual behaviors into the factors are normally developed using statistical procedures involving factor analysis. The advantage for educators with these checklists is that these empirical scales are designed for use by personnel outside of clinical setting (i.e. school psychologists and teachers).

One such empirical rating scale, and the scale for categorizing the behavior of students in this study, is the Child Behavior Checklist-Teacher's Report Form (Achenbach and Edelbrock, 1985). The Child Behavior

Checklist-Teacher's Report Form was developed to provide a standardized description of a child's behavior, based on the teacher's knowledge of a child's actions. The Child Behavior Checklist-Teacher's Report Form is one scale of the widely-used, well-respected, and well-documented series of scales developed by Achenbach and Edelbrock.

The result of the Child Behavior Checklist-Teacher's Report Form (Achenbach & Edelbrock, 1985) is a scoring scheme that compares the target child with a normative group. The scoring procedures reduce the 110 specific student behaviors found on the Child Behavior Checklist-Teacher's Report Form to seventeen narrow-band behavior syndromes. These syndromes are then clustered into two broad-band groups, generally known as externalizing and internalizing behaviors. The externalizing group is aggressive and antisocial, while the internalizing group is characterized as fearful and inhibited. It is these two broad-band scales with which this study is concerned.

Categorization Problems

Even after categorization, the information may be irrelevant or not appropriate. A study reported by Zabel, Peterson, Smith, and White (1982) is a case in point. This study was conducted by survey of special education teachers in Iowa, Nebraska, and Kansas. The study was to determine what material is available to educators for educational planning and the value of that material in the planning.

Teachers were asked to indicate what material was available to them and how useful the information was in educational planing. The availability of identified material was reported by a percentage and presented in rank order. The usefulness of the material was rated on a Likert-like scale ranging from one to seven, with one being unimportant and seven being essential. These

usefulness scores were reported in a mean average and were also ranked. This procedure was followed for both the placement decision and the reintegration scenarios (Zabel, Peterson, Smith, & White, 1982).

These researchers found that a discrepancy existed between the information that was available to educators in making educational decisions and the value (usefulness) teachers placed on that information. In both cases, it may be generalized that the most readily available information was not the most useful in making educational decisions (Zabel, Peterson, Smith, & White, 1982).

Summary

There are difficulties in categorizing behavior because of the complexity of defining behavior. Behavior is defined as all that a person does and is only inappropriate in the context of setting. Educators have the responsibility to teach both academic and behavior curricula. Two methods of behavior categorization, the clinical and the empirical, are used in classifying behavior. The clinical model requires extensive training in observation, diagnosis, etiology, and intervention. The empirical model requires only that the rater knows the subject and can respond to items describing behavior. Even after behavior has been categorized, the data that led to the categorization may not be useful to teachers working in classrooms.

Considerations in Designing Behavioral Interventions for Inappropriate Behaviors

Long and Newman (1980), discuss classroom management with an elaboration of Redl's four-notched scale These are provided below with a review of Long and Newman's discussion.

Permitting. According to Long and Newman, permitting behavior is designed to inform the subjects of allowable behavior. Not only is it important for students to know what is not allowable, it is equally necessary to inform them of what behavior is permissible.

Tolerating. Some behaviors may be tolerated, but not sanctioned by the teacher (Long & Newman). When the teacher tolerates some inappropriate behaviors, students learn that although rules are to be followed, an opportunity exists to learn without undue fear of punishment.

Interfering with behavior. Unlike permitting and tolerating, the interfering with behavior intervention is designed to change behavior. Long and Newman discuss twelve levels of interventions. These interventions range from ignoring inappropriate behavior through physical restraint. The teacher makes intervention decisions bases on the context of the behavior and setting.

Preventive planning. Similar to permitting and tolerating, preventive planning is not a behavioral intervention. Preventive planning is designing and altering the environment or curriculum so that the likelihood of inappropriate behavior is reduced.

Behavioral Intervention Research

Behavioral interventions, for the purposes of this study, are those activities undertaken by the teacher to hinder or change a student's behavior. Interventions from the clinical approach are not of interest to the purpose of this study and will not be discussed. Included in this section will be behavioral intervention strategies, intervention efficacy, and intervention acceptability.

Behavioral Intervention Strategies

Behavioral intervention strategies may be considered as a bank of specific intervention options. A teacher might choose from among a number of possible interventions in the bank the one intervention with the best probability of success. The literature abounds with specific interventions tested under controlled research conditions.

Most discussion of educational interventions occurs in the classroom management literature. Charles (1989), Good and Brophy (1978), Thomas (1980), Walker (1979), and Walker and Shea (1984), are examples of works in which interventions are discussed in terms of classroom management techniques. These are examples of texts which discuss intervention strategies--an efficient method of collecting interventions that have similar aspects into identifiable groups. These texts typically instruct on the common attributes of a class or category of intervention that is useful to developing the general understanding of behavioral interventions.

A less efficient method of reviewing behavioral interventions is to review actual studies of specific behavioral interventions. By their very nature, studies investigating behavioral interventions are very specific, not providing the broad perspective necessary for developing a general understanding of a class or category of interventions. An example of how specifically detailed behavioral intervention research can get is the response cost lottery (Witt & Elliott, 1982) or home-base reinforcement (Witt, Hannafin, & Martens, 1983).

Such a detailed search is completely beyond the scope of this review. Rather, this review is to build a foundation for the broad spectrum of strategies on which teachers may rely in developing behavioral interventions for inappropriate behavior.

Educators have limiting parameters within which they must work. Educators must keep their educational goals in mind when designing interventions. Certainly there are interventions that guarantee the elimination of a specific behavior, but potentially may interfere with the overall educational goal. Teachers must also determine whether the intervention is morally circumspect and legal. Also, as is found to be a determining factor in the literature to be discussed below, teachers must decide if the intervention is personally acceptable.

The interventionist must consider all these aspect prior to the implementation of an intervention. For example, tying a child to a chair with a rope during music class would most likely end the problem of that child running around the room during music class, but the intervention may interfere with the overall educational goal, is morally violate, possibly illegal, and wholly unacceptable. The research has reduced these concerns regarding interventions into three areas of investigation--efficacy, acceptability, and frequency.

Behavioral Intervention Efficacy

Studies of intervention efficacy investigate the effectiveness of interventions. Martens, Peterson, Witt, and Cirone (1986) identify this concept by referring to intervention effectiveness as "...the ability to produce changes in student behavior" (p. 213). As is typical with interventions research, efficacy research is remarkably varied and detailed. Below is a small sampling of studies demonstrating the efficacy of several interventions. Following the sampling is a brief discussion of intervention generalization issues.

A sample behavioral intervention. As discussed earlier, interventions may be as numerous and varied as the number of students and their inappropriate behaviors. Therefore, any attempt to detail all of the interventions that appear in the efficacy research literature would extend beyond the scope of this review. However, it would be prudent to demonstrate that behavioral interventions can produce behavior change. To demonstrate this, a sample of a typical study is presented. The purpose of the following review is to show that interventions have efficacy.

Witt and Elliott (1982) investigated the efficacy of response cost interventions. In a study that utilized an ABAB design, three students of the twenty-eight in the classroom were identified as target subjects. These subjects were boys whose behavior was such that they had been referred for placement in a room for behavior disordered students. The response cost lottery was designed so that during an identified study period the students would retain slips of paper for positive behavior and lose slips of paper for inappropriate behavior. The slips remaining at the end of the study period were collected by the teacher each day. As was explained to the subjects, the greater the number of paper slips collected each day increased the chances of winning a desired prize at the end of the week.

The subjects of the study were on task during the baseline for a mean of 10% of the intervals observed, increasing to a mean of 68% during the first treatment phase. At reversal to baseline conditions, the subjects were on task for a mean of 43% of the intervals. During the second intervention period, the subjects on-task mean increased to 73%. A control observation of the non-subject students indicated a mean of on-task behavior at a range of 58% to 94%, averaging 80% through the investigation period. The result of this

particular study indicated that through the response cost lottery the three subjects on the verge of placement in a room for behavior disordered students were able to improve to a behavior rate similar to the other students in the room (Witt & Elliott, 1982).

Efficacy and generalization. As Witt and Elliott (1982) demonstrate, it is possible to improve the classroom behavior of students by implementing interventions. Thus, the efficacy of implementing interventions is demonstrated. Billingsley (1986) looks at the efficacy issue from a slightly different perspective.

Billingsley (1986) discusses the issue of efficacy in terms of generalization. Billingsley intimates that most interventions have some degree of effectiveness in changing behavior, but the efficacy of interventions is one of generalization. Though the child may learn appropriate behavioral responses in one setting, inappropriate behavior may remain unchecked in another setting. "It has become a widely recognized fact that acquisition of behaviors in an instructional setting is insufficient to insure movement toward an independent and functional adjustment to one's environment." (p. 1). Therefore, according to Billingsley, the search for intervention efficacy reflects a strong generalization component.

Conversely, Grossnickle and Sesko (1985) suggest that efficacy is one of intervention specificity. Perhaps stating the obvious, they write that "No ideal cure or punishment exists for all types of misbehavior" (p. 45). Therefore, it is necessary to "pinpoint the causes or motivation for misbehavior before setting out to cure" the student of inappropriate behavior (p. 45).

Though Billingsley (1986) raises a valid concern regarding the generalization of interventions, Grossnickle and Sesko (1985) would seem to

argue that something is better than nothing. Though it would appear to be a laudable goal for intervening in the inappropriate behaviors of a student in a manner that would transfer across settings, educators have a responsibility to the offending student, as well as that student's peers, to intervene and stop the inappropriate behavior as quickly and appropriately as possible.

Behavioral Intervention Acceptability

Studies of intervention acceptability investigate how well specific interventions are accepted, or tolerated, by those connected to the procedures. Typically, acceptability studies examine the perceptions of interventionists, determining intervention fairness, reasonableness, and appropriateness (Turco, Witt, & Elliott, 1985). That fairness, reasonableness, and appropriateness are components of acceptability is not all that surprising. A logical conclusion would be that a specific intervention selected for implementation would be subject to some evaluation scheme prior to its use.

Studies investigating the acceptability of interventions have taken place in clinical and educational settings. Witt and Martens (1983) refer to the difficulties of generalizing the findings of clinical studies to schools. More specifically, in terms of interventions, Witt and Martens mention that a "different set of variables may influence the acceptability of interventions in schools" (p. 511). Clearly the mission and clientele of mental health institutions are different than those of the schools. Since this study is concerned only with educational interventions, only acceptability of interventions in educational setting will be reviewed. Presented below is a look at selected school-based intervention acceptability research.

A common method of conducting acceptability research in the educational community is case study research. In these studies, researchers

provide narrative scenarios consisting of hypothetical behavior(s) to a research sample composed of teachers or other applicable personnel. The subjects read the case study and then make some judgment about specified interventions. Typically, the collective judgments of the sample are then tabulated in a manner which provides a ranking of intervention acceptability.

Witt and Martens (1983) conducted one such study as described above. They had 180 preservice teachers and student teachers read one case study about a boy with behavior problems from a pool of 18 case studies. The pool of case studies contained a mild behavior problem, a moderate behavior problem, and a severe behavior problem. The possible interventions from which the teachers could chose included a total of six--three to increase behavior and three to decrease behavior. The subjects then rated these six classroom interventions as to intervention acceptability on a Likert scale. Means were calculated for the acceptability rating of each intervention for each of the three behavior severity classifications. A principal component factor analysis with varimax rotation determined factors for intervention acceptability.

The results of the Witt and Martens (1983) study indicated that as a behavior problem increased in severity, the more acceptable strong intrusive interventions became. Additionally, the factor analysis indicated that five issues are present in designing interventions for educational use. These five issues are: (1) intervention suitability for mainstream classrooms; (2) possible risk to the child; (3) teacher time; (4) negative side effects; and (5) teacher intervention skills.

In another case study, Witt, Moe, Gutkin, and Andrews (1984) found similar results to Witt and Martens (1983). In the Witt et al. study, case studies were developed to explain the behavior problem and potential interventions in

specific jargon--behavioral, pragmatic, or humanistic. The case studies were submitted to 112 elementary (K-8) teachers for review. The rating of the teachers were recorded on the Intervention Rating Profile (Witt & Martens, 1983).

The results of this study support the hypothesis that the acceptability (reasonableness, fairness, and appropriateness) of interventions varies according to the perceptions of the teacher. A note of interest in the Witt et al. (1984) study is that this concept of acceptability changes over time. As teachers became more experienced, their acceptability over the range of acceptable interventions narrowed.

Turco, Witt, and Elliott (1985), provide a succinct summation of acceptability research. "...Researchers have found large individual differences among teachers in acceptability judgments, although all teachers are concerned that interventions be acceptable" (p. 52). Although it is difficult to predict what intervention may be acceptable to a particular person or group, it remains apparent that teachers make a judgment in regard to acceptability.

Summary

Interventions are activities undertaken by the teacher to hinder or change a student's behavior. In order to review literature relevant to changing student behavior, three areas were defined--behavioral intervention strategies, behavioral intervention efficacy, and behavioral intervention acceptability.

Behavior management textbooks provide the most appropriate and useful synthesis of intervention strategies. These texts contain a large number of strategies from which teachers may glean possible interventions. The research is replete with studies of individual interventions, but is not a practical method for teachers to get an overview of the multiple interventions necessary

for classroom use.

The research has abundant evidence supporting the efficacy of interventions. However, the concern exists that interventions may not provide suitable training for students to generalize their learning. The challenge remains to change student behavior in schools for the improvement of the misbehaving student as well as the other students in the classroom.

Educators have restrictions, both ethical and legal, as to what interventions are applicable to their students. Individual teachers may find an ethical and legal intervention to be personally distasteful. The evidence indicates that a teacher is not likely to use a distasteful intervention, regardless of the child's behavior and irrespective of the established effectiveness of the intervention.

Selection Issues to Consider

Teacher interventions are not without some personal cost to the teacher. Wood suggests that interventions are selected on the basis of two goals (1991). Teachers "(a) ... manage or stop the problem behavior and (b) redirect the student to learning and permit the teacher to get back to the primary task of instruction" (p. 20). In order to accomplish these goals, a personal cost is extracted from the teacher. This cost varies somewhat among individuals and is based on variables such as: the resources, both personal and material, required to "plan, implement, and maintain" (p. 18) the intervention; the stress experienced by the teacher; and the ethical concerns regarding the intervention on the subjects. Wood developed a scale that rates specific interventions on these associated personal costs.

Wood (1988) indicates that teachers have three considerations when choosing interventions. These considerations are principles, outcomes, and

role/setting. Principles refer to a set of beliefs, or a theoretical perspective, about behavior cause and behavior change. Outcomes are the expected results of an intervention. Role/setting refers to the social, or community, expectations and standards in which the teachers work. Using this triad as a basis for reviewing several previous works by Wood and various colleagues, Wood suggests that as the behavior of a given population of students moves further away from the norm, teachers tend to select interventions that are increasingly aversive.

Grossnickle and Sesko (1985) seem to make a similar point. As a student's behavior becomes increasing aversive or pervasive, increasingly stronger interventions may be necessary. They propose a school wide strategy for handling the problems presented by misbehaving students. This strategy ranges from "motivational pep talks" (p. 41) and reprimands, through contingency contracts, to suspensions and expulsions. These interventions range from those that may be implemented by teachers and administrators to those that may be enforced by administrators alone.

In an effort to reduce the cost, as described by Wood (1988) above, methods exist to provide support among teachers. Johnson and Pugach (1991) describe a method that uses peer collaboration to increase the effectiveness of interventions, while reducing the personal cost to teachers who have the responsibility of students with learning and behavior problems. This peer collaboration was described in a report of research conducted in Wyoming, Wisconsin, and Illinois.

Johnson and Pugach (1991) trained a group of teachers in the process of peer collaboration. This process contained four steps that include clarifying the question or problem, summarizing that problem, implementing an

intervention, and evaluating the outcome. After a period of training, implementation of the process was started. A control group of teachers were not trained in this process.

The results indicated that the teachers trained in the peer collaboration tended to change their expectations of the intervention and, as a result, reduced the stress they felt. The trained teachers became more tolerant of the students demands, while the control group became less tolerant as the year progressed.

Summary

Interventions should be developed according to a continuum based on intervention aggressiveness. However, all interventions extract an emotional, personal cost from the teacher implementing the intervention. This personal cost subtracts from the resources available. A teacher must consider principles, outcomes, and role or setting when developing an intervention strategy. Interventions also may be effectively implemented in a school-wide strategy. Teachers may assist each other in developing and implementing interventions.

Summary

Four areas were addressed in this review. These areas established the concept of inappropriate behavior, reviewed the two major categories of inappropriate behavior, reviewed selected behavioral intervention research, and presented interventionist considerations in designing behavioral interventions for inappropriate behaviors.

Behavior categorization is a function of its existence in relation of its context with the setting. Categorization of inappropriate behavior is hampered by the inability of professionals to utilize a common model. One model for

assessment is the clinical model, which is used by professionals highly trained in the areas of observation, diagnosis, etiology, and clinical intervention. The other model is the empirical model, which is derived from statistical methodology. The empirical model is designed for use by school psychologists and teachers.

Interventions were reviewed in terms of strategies, efficacy, and acceptability. The most efficient method of reviewing strategies is by using textbooks. Textbooks provide a synthesis of the many interventions that may be found in journals. Selected studies that demonstrated the efficacy of interventions were reviewed. However, some authors suggest that efficacy should be kept within the context of generalization. Acceptability of interventions tends to be based on intervention fairness, reasonableness, and appropriateness. Teachers may find interventions that are legal and ethical to be personally distasteful and unusable.

Interventions are designed in relationship to the student behavior. A continuum with four steps was presented as a likely framework when developing interventions. Just as the student behavior taxes a teacher emotionally, the intervention may have similar impact. To reduce this cost to teachers, teachers may develop a peer collaboration system to assist one another.

Chapter Three: Methods

Introduction

The purpose of this exploratory study was to examine the relationship between teachers' report of student misbehavior and the frequency with which they implement behavioral interventions . To this end, this study investigated two relationships between these variables by using a scale that quantifies teachers' reports regarding the frequency of their intervention use with a target student and a scale that classifies that target student's behavior.

An overview of the existing database follows, along with a description of the methods used in the present study.

Existing Database

The data utilized in this investigation were retrieved from an existing database. This existing database was assembled as part of a three-year (1986-1989), federally funded research project conducted at the University of Nebraska-Lincoln. This research project, officially titled the Diagnosis and Service Delivery Systems in Childhood Behavior Disorders project, was more familiarly known as the Behavior Disorders Research Project (BDRP) (Conoley & Peterson, 1986). The purpose of the BDRP was to study the school and community services children receive and to examine the concordance of school and mental health diagnostic systems. The BDRP satisfied all requirements of the University of Nebraska Institutional Review Board for human subjects research.

Target Subjects for BDRP

The students who served as target subjects for the BDRP (N=483) were from the southeast corner of the State of Nebraska, in an area of approximately a 100 mile radius of the city of Lincoln. The target subjects

were students between the ages of 11 and 15 identified as behaviorally disordered (BD), as learning disabled (LD) , or as general education non-disabled students (ND).

The student sample for this project was determined by a multi-phased selection process. The selection process began with project personnel determining the attendance centers for all students identified as behaviorally disordered and learning disabled within the specified radius of Lincoln. This determination of attendance centers for students was made using Nebraska State Department of Education (NSDE) student demographic data. Attendance centers were identified in that the NSDE could not provide the names of individual students without violating student and parental rights to privacy.

Project personnel contacted the school administration of the schools at which these as yet unidentified students attended. The first contact with the schools was by letter, with a telephone follow-up, to the director of special education for that school. These contacts solicited participation of the schools in the project. Directors who were agreeable to the BDRP purposes were encouraged to secure the necessary permission from appropriate district personnel. Once permission was granted for district participation in the project, the districts identified the children with placements in special education as behaviorally disordered and learning disabled.

Parents were contacted to garner consent for their child's participation in the study. Contact was established by either district personnel or BDRP personnel. Only those students whom parents granted permission were included in the BDRP.

Present Study

Target Subjects of the Present Study

The present study uses only a portion of the data generated by the BDRP. It should be noted that in the original, larger study the target subjects were students. In the present study, the target subjects are the teachers of those students, not the students themselves.

The present study used the Internalizing normalized T-score, the Externalizing normalized T-score, and the Total Problems normalized T-score from the Child Behavior Checklist-Teacher Report Form (CBC-TRF) (Achenbach & Edelbrock, 1985) as the predictor variable. The five teacher intervention factors determined by the BDRP Intervention Survey (Conoley & Peterson, 1986) were used as the criterion variable.

Instruments and Measures

Child Behavior Checklist-Teacher Report Form

The Child Behavior Checklist-Teacher Report Form (CBC-TRF) (Achenbach & Edelbrock, 1985) is a behavior checklist that produces broad-band classifications of student behavior. Although the CBC-TRF also produces information and scores for school performance, adaptive functioning, and narrow-band behavioral syndromes, only the broad-band behavioral and total problems scores will be used in this study. Therefore, the following discussion attends only to the broad-band behavioral and total problem scores, omitting reference to the other parts.

The CBC-TRF (Achenbach & Edelbrock, 1985) solicits and rates student behavior based on teacher observation. The CBC-TRF provides teachers the opportunity to rate student behavior/emotional problems on 118 items related to specific student behaviors that may be problematic. The

ratings of student behavior are according to teacher perceptions and are measured on a three-point scale indicating whether the item is not true (0), somewhat or sometimes true (1), or very true or often true (2). The teacher is to consider student behavior within the most recent two month time period. Three open-ended items are included in the behavior section; these are not analyzed in the present study.

Teacher responses on the CBC-TRF (Achenbach & Edelbrock, 1985) are scored and reported on separate forms according to student gender and age. Boys and girls are scored and reported separately, as are the age groups of 6-11 and 12-16. Boys and girls from the 12-16 age group form was used in the BDRP.

Norms. Achenbach and Edelbrock provide appropriate and adequate normative information for the CBC-TRF (1985). Normative samples were derived from 665 teachers (1,100 students), representing regular education grades 1 through 10. One boy and one girl from each teacher's classroom was randomly selected for CBC-TRF completion. Three geographic locations representing the midwest (Omaha, Nebraska) south (Nashville, Tennessee), and east (Pittsburgh, Pennsylvania) were used to determine the normative scores. Return rate of completed forms was 92.8%. Socioeconomic status and race statistics of the normative sample were reported by the authors. Christenson (1992), writing for the Buros Yearbook of Mental Measurements, suggests that the norms established by Achenbach and Edelbrock are a major strength of the CBC-TRF.

Validity. Achenbach and Edelbrock (1986) provide appropriate description in determining content and construct validity of the CBC-TRF (Achenbach and Edelbrock, 1985). Content and construct validity will be

discussed in greater detail below. Before this discussion of validity, a brief overview of the CBC-TRF and its relationship to the CBCL is presented.

The CBC-TRF was designed to measure essentially the same student behavioral problems as the original Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1981), but from the perspective of the teacher instead of the parent. The CBCL was developed to assess the problem areas of children that were of concern to parents and mental health professionals. In the CBCL the social/behavioral items were developed from clinical and research literature, along with the consultation of mental health professionals. The CBCL used children referred for mental health services or special school services to determine the broad-band groups. Scores from a total of 2,300 students were used to determine the broad-band groups. The referred children were reported to have scored significantly higher than the non-referred children on each item except for *Allergy* and *Asthma* ($p<.005$). As Achenbach and Edelbrock concluded, the CBCL seemed to validate the professional judgments of the mental health workers (1983).

The CBC-TRF (Achenbach & Edelbrock, 1985) utilized many of the same items for assessment as the CBCL (Achenbach & Edelbrock, 1981). Some items from the CBCL were considered not suitable for teacher assessment, as the behaviors were not observable in the school setting. CBCL items removed included the two non-significant items (Allergy and Asthma) along with three other items: bowel movements outside toilet; cruel to animals; and disobedient at home. These items were replaced with the following items: Hums or makes other odd noises in class; Fails to finish things he/she starts; Defiant, talks back to staff; Fidgets; and Difficulty following directions. (Achenbach & Edelbrock, 1986).

Content validity is the determination of whether a device actually measures what it is supposed to measure. Achenbach and Edelbrock (1986) determined that the CBC-TRF was intended to measure the problems children have in school, as defined in the CBCL discussion above. To determine if content validity existed, they compared the scores obtained on the items of the CBC-TRF with 1100 students referred for behavioral or social/emotional services. They found that significant differences ($p<.005$) existed on each item, with the exception of item number 75, shy or timid. From these results, they concluded that the CBC-TRF had satisfactory content validity when using the mental health referrals as the standard.

The assessment of content validity provided by Achenbach and Edelbrock for the CBC-TRF is in agreement with the standards of content validity as discussed by Borg and Gall (1983). Writing in the Buros Mental Measurements Yearbook, Christenson (1992) indicates that the CBC-TRF has appropriate description of content validity. Achenbach and Edelbrock caution the user to determine if the content of the CBC-TRF is appropriate for the intended use.

Achenbach and Edelbrock (1986) also provide evidence that the CBC-TRF (Achenbach & Edelbrock, 1985) has construct validity. They point out that the main purpose of the CBC-TRF is to determine discriminating groupings of behavior so that the causes, outcomes, and best treatment of a disorder might be determined. To establish the construct validity, the CBC-TRF narrow-band behavior syndromes and broad-band scores were correlated with the Conners Revised Teacher Rating Scale, which is used to assess hyperactivity and attention deficits. Acceptable Pearson correlations were reported across similar indicators of the two protocols. Additional

evidence of construct validity was provided by comparing the scores of the CBC-TRF with independently determined diagnoses.

Reliability. Reliability is documented and established for the CBC-TRF (Achenbach & Edelbrock, 1985). Two test-retest groups were implemented to assess the test-retest reliability of the CBC-TRF--one group on a fifteen-day timeline, and the other group on a seven-day schedule. Both groups were subjected to the Pearson correlation and the t-test. Although the separate item correlation varied from the median correlation in both retest periods, they were judged acceptable. The fifteen day retest was .84 and the seven day retest was .90. The authors attributed the stronger correlation in the seven-day retest group to the shorter elapsed time.

The t-test was used to determine if a difference existed in the mean magnitude between the test and the retest. Although 17 individual items (of a possible 89) proved to exceed the expected difference ($p < .05$), the overall differences between the two sets of scores were considered acceptable as well.

The reliability of the CBC-TRF withstands the scrutiny of outside assessments. Christenson (1992) reports that Achenbach and Edelbrock have "provided strong, sound evidence" for the reliability data reported in the CBC-TRF (p. 64). Elliott and Busse (1992) similarly report that the reliabilities reported by Achenbach and Edelbrock are "very respectable and compare well to other teacher rating scales" (p. 167).

Variables of interest to present study. The CBC-TRF (Achenbach & Edelbrock, 1985) scores of interest in the present study are the broad-band externalizing, the broad-band internalizing, and the total problems scores. The externalizing broad-band group is characteristic of student behaviors that are

"...aggressive, antisocial, [and] undercontrolled..." (Achenbach & Edelbrock, 1983, p. 31). The internalizing broad-band group is descriptive of students that are "...fearful, inhibited, [and] overcontrolled..." (p. 31). In the development of the CBC-TRF, some inappropriate behaviors could not be separated exclusively into one or the other broad-band categories. Therefore, a total problem score provides information regarding these non-exclusive inappropriate behaviors.

BDRP Intervention Survey

Teacher perceptions regarding the frequency of their behavior-oriented interventions were determined by the BDRP Intervention Survey (Conoley & Peterson, 1986). Developed specifically Behavior Disorders Research Project, the BDRP Intervention Survey is an adaptation of the Classroom Intervention Profile (Martens, Peterson, Witt, & Cirone, 1986). The BDRP Intervention Survey is reproduced in Appendix A.

The BDRP Intervention Survey (Conoley & Peterson, 1986) contained a total of fifty-three items in three major categories. One category was composed of questions referring to the teacher's and the child's demographic background. This category was composed of 19 items. A second category asked the teacher to identify specific models of behavior theory in which the teacher had received training. Six models of behavior theory were presented for teachers to respond. The third category was composed of the items of interest to this study--the rating of the perceived frequency with which the teacher used a particular behavior oriented intervention for a specifically identified student. This portion consisted of 28 Likert-like items on 28 potential teacher behavioral interventions. Since only the third portion of the BDRP Intervention Survey is of interest in this study, and the first two categories are

not of interest, only the section dealing with the perceived frequency of behavioral-oriented interventions is discussed in the following narrative.

It should be noted that four items on the BDRP Intervention Survey (Conoley & Peterson, 1986) were not from the Classroom Intervention Profile (Martens et al., 1986). Also, eight items from the Classroom Intervention Profile were omitted from the BDRP Intervention Survey. These 12 items were not involved in the factor analysis; the only items submitted for this procedure were the same 24 items appearing on both the Classroom Intervention Profile and the BDRP Intervention Survey. See Appendix C for itemization of these differences.

Instructions to participating teachers on the portion of the survey dealing with the frequency of their behavioral interventions asked them to "...indicate how frequently you have employed each intervention with regard to [name of target student] during the time you work directly with this student" (BDRP Intervention Survey, Conoley & Peterson, 1986). On the intervention items, the teachers were to respond on the Likert-like scale consisting of five points ranging from "never" through "daily".

Validity. Since the BDRP Intervention Survey (Conoley & Peterson, 1986) is a second generation of the Classroom Intervention Profile (Martens et al., 1986), some discussion of the Classroom Intervention Profile validity is warranted here. The Classroom Intervention Profile is reproduced in Appendix B.

In their investigation, Martens et al. (1986) conducted validity analysis by distributing the questionnaire to a pilot group of 24 teachers. These teachers were asked to complete open-ended question regarding their likes and dislikes of the survey in addition to judging the profile on the basis of

ambiguous wording. The pilot teachers reported no ambiguous wording and the likes/dislikes fell into four categories: "(a) item wording was clear and concise; (b) item sampling was comprehensive; (c) descriptions accurately represented interventions in actual use; and (d) completion the questionnaire was time consuming because of the large item number" (p. 215).

Since the BDRP Intervention Survey (Conoley & Peterson, 1986) was based on the Classroom Intervention Profile (Martens et al., 1986), another pilot study of the BDRP Intervention Survey was not conducted. Need for another pilot study was not warranted since the items used in the BDRP Intervention Survey did not substantively change from the Classroom Intervention Profile.

The last component of validity of concern with the BDRP Intervention Survey (Conoley & Peterson, 1986) is face validity. Face validity, the subjective judgment of the evaluator's appraisal based on the apparent relevance of a test to its intended purpose (Borg & Gall, 1983), is acceptable for the BDRP Intervention Survey. Martens, Peterson, Witt, and Cirone (1986) judged the Classroom Intervention Profile to have validity. Since the BDRP was based on this original questionnaire by Martens et al., the BDRP Intervention Survey was judge to be similarly valid.

Content, predictive, and concurrent validity was not necessary for the use of the BDRP Intervention Survey in the present study. The stated purpose of the BDRP Intervention Survey is not related to achievement, skill, or proficiency testing. Also, no attempt is made to predict future behavior or correlate current perceptions to perceptions derived from other questionnaires or surveys. The BDRP Intervention Survey asks only what a teacher's perception is at a particular time.

Reliability. In that both systematic and random errors may affect the internal consistency (one form of reliability) of a measure, reliability checks on the BDRP Intervention Survey were conducted. In general, two major procedures for estimation of reliability were available--those procedures necessitating two administrations of a measure, and those procedures allowing only a single administration (Crocker & Algina, 1986).

Since the two-administration method of reliability estimation involves the administration of either two separate devices or a single device twice, this method was judged impractical given the single probe nature of the BDRP Intervention Survey. Additionally, multiple assessment methods measure different sources of error than that of the single form methods. The multiple assessment methods measure the sources of error in either the change in the respondent over time or the content sampling from one form to a second form. Therefore, the single administration reliability method was selected for determining an estimation of reliability (Crocker & Algina, 1986).

Crocker and Algina (1986) describe two procedures in which the reliability estimates utilizing a single administration for a measure may be established--the split-half reliability methods and the covariant methods. A problem with the split-half methods, described by Crocker and Algina, is in the underestimation of the reliability estimate due to the error of measurement inherent in shorter tests. Since the split-half method divides the single test into two measures, the possibility of increased error of measurement is enhanced, thereby reducing the estimate of reliability. An additional drawback to the split-half method is that is does not produce a unique estimate of a test's reliability because there are virtually an infinite number of ways to split the test into halves (1986).

Crocker and Algina indicate that these problems with split-half methods may be alleviated by using covariant methods of estimating reliability. Three covariant methods are available: Hoyt's, Kuder-Richardson 20 (and 21), and Cronbach's alpha. Hoyt's method utilizes the results of analysis of variance to determine the estimate of reliability. Kuder-Richardson's 20 and 21 is another method, but is only for use with dichotomous variables. Cronbach's alpha may be used with a wide variety of variables, of which the Likert-like scales is one.

Cronbach's alpha was used to determine reliability estimates of the BDRP Intervention Survey (Conoley & Peterson, 1986). The Cronbach alpha was selected for use because the Likert-like scale fits the criteria for its use. An additional consideration was that the analysis of variance, a requisite for Hoyt's, was an extra, unnecessary step for the purposes of this study. The Cronbach's alpha for estimated reliability of the BDRP Intervention Survey was .91. As a result, the BDRP Intervention Survey was judged to have adequate internal consistency.

It should be noted that these results are derived from the total score of the BDRP Intervention Survey (Conoley & Peterson, 1986) and is not based on sub-scores derived from the six factors. The number of BDRP Intervention Survey respondents (N=162) was not of sufficient number to allow for computing the alpha for each factor. The general rule suggested by Crocker and Algina (1986) for determining sub-test scores (i.e. factors) is "... the larger of the following: 100 examinees or 10 times the number of variables" (p. 296). Since the BDRP Intervention Survey uses 24 variables in this study, it would be necessary to have 240 respondents to determine the alpha for each factor.

Factor analysis. The results of the original factor analysis (Martens et al., 1986) provided six factors. The factors were labeled I through VI: Factor I, Redirection; Factor II, Consultation; Factor III, Manipulation of material reward; Factor IV, Removal from classroom; Factor V, Time-out in the classroom; and Factor VI, Alter classroom physical environment. The fifth factor, Factor V, will not be used in the analysis of this study. This factor contained only two items from those found in the Classroom Intervention Profile (Martens et al., 1986).

An overview of the five factors and a complete list of the associated BDRP Intervention Survey items are in Appendix C. Some examples are provided below:

I. Redirection. Seven items in the BDRP Intervention Survey identified this factor. Examples of redirection are "Verbally cue, prompt, or redirect student behavior" and "Verbally encourage desired behavior".

II. Consultation. Five items in the BDRP Intervention Survey identified the second factor. The teacher was provided a list of potential specialists, including psychologists and principals, and asked if they "Seek support or assistance regarding this student in person or over telephone..."

III. Manipulation of material reward. Five BDRP Intervention Survey items identified the third factor. An example of these items is "Reinforce student with materials, tokens, or points when the problem behavior is not occurring".

IV. Removal from classroom. Four Intervention Survey items were in the fourth factor. An example of this item is "Require student to do time-out in special isolation room". Interestingly, the item "Seeking support or assistance regarding this student in person or over telephone: Guidance Counselor" was most associated with this factor.

V. Time-out in the classroom. No items from the BDRP Intervention Survey were in Factor V.

VI. Alter classroom physical environment. Three items of the BDRP Intervention Survey were most associated with Factor VI. "Change student's place in classroom" and "Change student's curriculum, assignments, and/or schedule" are examples of the items found in Factor VI.

Although this study will use five of the six factors identified by Martens et al. (1986), a reporting of a factor analysis done with the data from the present study will be briefly discussed here. The completed twenty-four intervention items found on the BDRP Intervention Survey (Peterson & Conoley, 1986) were submitted to principal component factor analysis. The results of the varimax rotation provided three factors. The results of this rotation were generally similar to the results of the original study conducted by Martens et al., but did not duplicate exactly the factor analysis of the Classroom Intervention Survey.

This analysis produced results that were generally similar to that of the original factor analysis, although some current items did not fit exactly with the initial factor descriptors. However, because of the desire to maintain compatibility to the earlier study and the generally comparable results of the factor analysis on the current data, the decision was made to use the analysis on the factors as defined by Martens et al. (1986). Therefore, the factor analysis conducted by Martens et al. will be used in this study, because the factors they identified were developed in a logical fashion and provided more detail in the intervention factors.

While the major thrust of the BDRP Intervention Survey (Conoley & Peterson, 1986) is very similar to that of the Classroom Intervention Profile

(Martens et al. 1986), some differences exist. For the purposes of the BDRP Intervention Survey, specific students (the subjects of the BDRP) were identified for each teacher to consider when determining the frequency of intervention implementation. Asking teachers to rate their perception of interventions for a specific child was a change from the original Classroom Intervention Profile (Martens et al., 1986). The original profile was a general measure of a teacher's perception regarding overall interventions for any and all students in that teacher's classroom.

In concluding this section of validity, reliability, and factor analysis of the BDRP Intervention Survey (Conoley & Peterson, 1986), three issues warrant concluding discussion. First, the decision to implement the original factor analysis, which involves the slight factor analysis differences between the original Classroom Intervention Profile (Martens et al., 1986) and the BDRP Intervention Survey was a judgment call. The basis for this decision was founded in the rationale that this study is exploratory, makes no educational or treatment decisions, and that no specific students were singled out for analysis. Given these considerations, it was determined to be permissible to accept the slight differences. Also, in that additional studies may be conducted, future refinements certainly will be made on intervention surveys. While these differences have been judged to be of little consequence, the reader is cautioned to acknowledge the changes in the factor scores and urged not to over-interpret these scores.

Procedures

The present study analyzes data from the fourth data collection phase of the BDRP (the fall of the third year of the project, 1988-89). During the fourth data collection phase of the BDRP, among other data collection

procedures, teachers participating in the project completed a CBC-TRF (Achenbach & Edelbrock, 1985) and a BDRP Intervention Survey (Conoley & Peterson, 1986). The demographic issues mentioned earlier in this study was also collected during this same time period. Therefore, all information discussed in the present study was collected at the same point in time.

The established project procedures for distributing and collecting the rating scales follow. The CBC-TRF (Achenbach & Edelbrock, 1985) was given to each teacher in person by project personnel. The project worker explained the requested task to the teacher and gave a target date for CBC-TRF completion. The project worker then collected the CBC-TRF at the established time and returned it to the project office. In some cases, arrangements were made for protocols to be mailed to the project office. The BDRP Intervention Surveys (Conoley & Peterson, 1986) were mailed directly to participating teachers. Instructions in the survey asked the teachers to complete the survey and return the completed form by post-paid return mail.

Scoring on completed and returned forms was conducted in the project office. The CBC-TRF (Achenbach & Edelbrock, 1985) was scored by the computerized program available from the CBC-TRF authors, that creates a series of T-scores. The results of the BDRP Intervention Survey (Conoley & Peterson, 1986) were entered directly onto a computer file. All scores for the CBC-TRF and the BDRP Intervention Survey, as well as all BDRP data, were stored on a mainframe computer file by the subject students' project ID number.

Statistical Analysis

Each research question is presented below with a discussion of the necessary statistical issues.

Question 1. What is the relationship between student behavior and the frequency with which classroom teachers indicate that they employ certain intervention factors?

The analysis implemented for question one is correlative analysis. Although correlative analysis may or may not determine directionality, in this question, no attempt will be made to determine directionality. Therefore, the variables under discussion for question 1 are not identified as predictor or criterion variables.

One variable for this question will be the normalized T-scores derived from the CBC-TRF (Achenbach & Edelbrock, 1985). These scores are the Internalizing normalized T-score, Externalizing normalized T-score, and the Total Problems normalized T-score. The normalized T-scores have a mean of 50 and standard deviation of 10 (McConaughy & Achenbach, 1988).

The variable to be correlated with the previously identified variable will be the intervention Factors from the BDRP Intervention Survey (Conoley & Peterson, 1986). The factors used in this analysis will be: Factors I, Redirection; Factor II, Consultation; Factor III, Manipulation of material reward; Factor IV, Removal from classroom; and Factor VI, Alter classroom physical environment.

The working hypothesis for question one is that student behaviors are statistically correlated with intervention factors. There are three statistical hypotheses of interest in question one. These hypotheses are for the Internalizing condition, the Externalizing condition, and the Total Problems condition. In each condition the null hypothesis is that no statistical difference exists between the correlation and zero. The alternative hypothesis in each case is that the correlation between the population correlation is greater than

or less than zero. The family-wise level of significance will be established at .05. This signifies that if a null hypothesis is rejected, there is a 5% chance that the rejection is false.

Question 2. Is it possible to determine a pattern of teacher implemented interventions based on specific clusters of student behavior?

Unlike question one, question two requires the variables to be identified for the purposes of analysis. In this question, the predictor variables are the normalized T-scores derived from the CBC-TRF (Achenbach & Edelbrock, 1980). These scores are discussed above. The criterion variable are the interventions Factors (also discussed above).

The analysis implemented for this question is full model regression. The working hypothesis is that it is possible to predict the intervention factors used by teachers based on the Internalizing, Externalizing, and Total Problems normalized T-score of the CBC-TRF. The statistical hypotheses are as follows: The null hypothesis is that there is no difference between the Factor score and the regression of Internalizing, Externalizing, and Total Problems normalized T-scores. The alternative hypothesis is that there is a difference between the Factor score and the regression of Internalizing, Externalizing, and Total Problems. The null and alternate hypothesis do not change across the five factors under investigation. The family-wise alpha is established at .05.

Table 3.1

Variables and Source for Questions 1 and 2

Variable	Source
Internalizing normalized T-score	CBC-TRF
Externalizing normalized T-score	CBC-TRF
Total problems normalized T-score	CBC-TRF
Factor I	BDRP Intervention Survey
Factor II	BDRP Intervention Survey
Factor III	BDRP Intervention Survey
Factor IV	BDRP Intervention Survey
Factor VI	BDRP Intervention Survey

Chapter Four: Results

Introduction

This exploratory study had two purposes. First, this study investigated the relationship between student behavior and the frequency with which teachers report using specific interventions. Second, this study attempted to determine particular patterns of interventions used for specific types of student behaviors.

Previous research efforts resulted in the development of student behavior surveys that identify and quantify problem student behavior. Previous research also assimilated teacher interventions into factors that provide categorical identification of behavioral interventions. No readily available research has been conducted under actual classroom conditions in which student behavior is correlated to the frequency with which teacher-selected and teacher-applied interventions are implemented.

Demographic Data

Demographic information provides descriptive characteristics regarding both the students and the teachers involved in this study. The student demographic information included original disability label, ethnicity, gender, socioeconomic status, and family status. Teacher demographic data included teacher gender, current level of education, and total number of years of teaching experience.

Both the students and teachers represented in this study are from schools located in southeast Nebraska within 100 miles of Lincoln, Nebraska. These students and teachers are from 41 public school districts, ranging in enrollment from 379 to 24,682 students.

Student Demographic Data

Of the 483 students in the larger study, 76 qualified for inclusion in the present study. This is the number of students from the larger study for whom their teachers completed both a BDRP Intervention Survey (Conoley & Peterson, 1986) and the CBC-TRF (Achenbach & Edelbrock, 1985). This represents about 15% of the total number of students in the larger study.

Disability label. Three disability categories were reported for the students in the larger study. These labels were behavioral disorders (BD), learning disabilities (LD), and non-disabled (ND). For the 76 students represented in the present study, the number of students with behavioral disorders was 30, which composed 39.5% of the sample. There were 46 students with learning disabilities in the sample, which represents 60.5%. No students in the present study were non-disabled. It is interesting to note that from the larger study teachers did not return a completed set of protocols for the BDRP Survey and the CBC-TRF for a single non-disabled student. Also, in that the three disability groups were roughly equal in number, it is somewhat surprising that the number of students identified as having learning disabilities outnumbers the students identified as having behavior disorders.

Ethnicity. The ethnicity of the students was established in four groups. These groups were White, Black, American Indian, and Hispanic. In the sample of 76 students, the largest component was that of White students. This group totaled 73, which was 96.1% of the sample used in this study. There was one Black student, one American Indian student, and one Hispanic student, representing 1.3% of the sample for each of these ethnic groups.

Gender. Of the 76 students in the sample, 60 (78.9%) were male and 16 (21.1%) were female. The unequal size of the gender sample used in this

study is reflective of the larger study. In the larger study, of the 483 students, 386 (77.8%) were male and 97 (19.6%) were female.

Socioeconomic status. Socioeconomic status was determined by the formula established by Hollingshead (1975). The socioeconomic status, as calculated by Hollingshead, ranged from a low of 9 to a high of 63.

Family status. Family status was reported in seven categories. The most common family constellation was that of both biological parents present in the home, 32 cases (54.2%), followed by one biological parent in the home, 10 cases (13.2%). A close third, with nine cases (11.8%), was one female parent in the home.

Teacher Demographic Data

Descriptive data for the teachers in this study are presented below. The data represent only those teachers for whom complete data sets were available on the target students. The data are for teacher gender, level of education, and years of teaching experience.

Teacher gender. Of the 76 teachers in the sample, 30 (39.5%) were male and 46 (60.5%) were female. As an observation, it is interesting to note that while the majority of the teachers are female, over three-fourths of identified disabled students were male (78.9%).

Current level of education. Education levels of teachers were categorized at five levels: (1) Bachelor degree; (2) Bachelor plus 15 graduate hours; (3) Master degree; (4) Master plus 15 hours; and (5) Master plus 30 hours. Eleven percent of the teachers held a bachelors degree only. Those with a bachelors plus 15 graduate hours comprised 30% of the teachers. The greatest percentage of teachers held a masters degree (34%). The masters plus 15 and plus 30 categories comprised 13% and 11% of the sample

respectively. The education level modal average for the teachers participating is this smaller study was category three (masters degree).

Total number of years teaching experience. The teaching experience of the teachers ranged widely, from new teachers to teachers with 36 years of experience. The mean average for the number of years teaching experience was 13.9 years, with a standard deviation of 8.7.

Data Analysis

Question 1

What is the relationship between student behavior and the frequency with which classroom teachers indicate that they employ certain interventions?

The analysis implemented for question one was correlative analysis, because the question seeks to find the relationship between two variables (Hinkle, Wiersma, & Jurs, 1988). The specific analysis used in Question One was the Pearson product-moment correlation (r), because the variables are paired variables and both variables are at the interval level of measurement. In correlative analysis, it is not necessary to identify the variable's origin. Each variable is discussed below.

The student behavior variables for question one are the three normalized T-scores derived from the CBC-TRF (Achenbach & Edelbrock, 1985). These three scores are the Internalizing T-score, Externalizing T-score, and the Total Problems T-score. The T-scores have a mean of 50 and standard deviation of 10 (McConaughy & Achenbach, 1988).

The teacher intervention variables are the Intervention Factors from the BDRP Intervention Survey (Conoley & Peterson, 1986). The factors used in this analysis were Factors I, II, III, IV, and VI. Factor V was omitted from this analysis due to its exclusion on the BDRP Intervention Survey from the

original Classroom Intervention Profile (Martens, et al., 1986). The mean and standard deviations of the Factors are reported in Table 4.1.

Discussion of the working and statistical hypotheses follow below. The working hypothesis is that student behaviors are statistically correlated with intervention factors. One would expect to find that specific behaviors are related to specific interventions. In order to investigate the working hypothesis, three statistical hypotheses were developed. The statistical hypotheses are as follows: Internalizing -- the null hypothesis is that no statistical difference exists the population correlation and zero; Externalizing -- the null hypothesis is that no statistical difference exists between the population correlation and zero; and Total Problems -- the null hypothesis is that no statistical difference exists between the population correlation and zero. The alternative hypothesis in each case is that the correlation between the population correlation is greater than or less than zero. The family-wise level of significance was established at .05. This signifies that if a null hypothesis is rejected, there is a 5% chance that the rejection is false.

The results of the Pearson product moment correlation are shown below in Table 4.2. In Table 4.2, the full name of the factors are truncated, as are the full names of the normalized T-scores. The correlation coefficient is reported for each paired variable as an indication of its level of significance.

Table 4.1

Mean and Standard Deviation of the Frequency Scores for Teacher Imposed Interventions

Factor	Mean	Standard Deviation
Factor I. Redirection	3.098	.856
Factor II. Consultation	1.729	.761
Factor III. Manipulation	1.923	.805
Factor IV. Remove	1.305	.489
Factor VI. Alter	1.978	.849

Table 4.2

Pearson Product Moment Correlation Coefficients for Intervention Factors and Internalized, Externalized, and Total Normalized T-Scores

	Factor I Redirection	Factor II Consult	Factor III Manipulate	Factor IV Remove	Factor VI Alter
	r	r	r	r	r
Internalized	.24	.32**	.17	.21	.36**
Externalized	.32**	.27	.06	.28	.30*
Total Problems	.34**	.35**	.12	.31*	.37**

n = 76

Family-wise alpha = .05

* $p < .01$

** $p < .005$

As shown in Table 4.2, there are no high correlations between the intervention factors and the normalized T-scores. The strongest correlations

tend to fall in the low positive correlation range (Hinkle, Wiersma, & Jurs, 1988). Hinkle, Wiersma, and Jurs suggest that correlations from .30 to .50 be classified as low positive correlations. They suggest that .30 is the lowest meaningful correlation based on the proportion of individual differences associated with each variable. With a correlation of .30, the coefficient of determination (r^2) is .09, meaning that less than .10 of the variance of one variable is shared with the variance of the second variable.

The strongest correlation reported in Table 4.2 is .37. This correlation is between Factor VI, Alter the Classroom Physical Environment and the Total Problems normalized T-score. Other low positive correlations from Table 4.2 are: Factor VI, Alter the Physical Environment and Internalized normalized T-score (.36); Factor II, Consultation and Total Problems normalized T-score (.35); and Factor I, Redirection and Total Problems normalized T-score (.34). Four additional correlations were found in this low positive correlation range, two correlations at .32, one at .31, and one at .30.

Table 4.2 shows that Factor III, Manipulation of material reward, was not significantly correlated with any one of the three CBC-TRF scores. Factor VI, Alter Classroom physical environment, was significantly correlated with all three CBC-TRF scores. All of the correlations that were greater than .30 were found to be significant within the Family-wise alpha of .05.

As interesting as the low positive correlations between behavior and interventions may be, a particular note of interest is the surprising weakness of correlations found between Factor III, Manipulation of Material Rewards and any of the T-scores. A statistical note in regard to the weak correlations with Factor III: none of the correlations for Factor III, Manipulation of Material Rewards, were significant, so there is no assurance that the correlation

actually was not zero.

As reported in the analysis findings, the strongest correlation found in this study was between Factor VI, Alter the Classroom Physical Environment and the Total Problems T-score. The Total Problems T-score represents all inappropriate behaviors, since behaviors can not always be considered to be dichotomously internal or external. From this observation, it would seem that for any inappropriate behavior, represented by the Total Problems T-score, the most frequent teacher intervention is to alter the physical environment in the classroom. This finding is further enhanced by the separate correlations of the Internalizing and Externalizing T-scores, both of which were also significantly correlated to Factor VI.

This correlation hints at an underlying concern regarding the Total Problems T-score. Given that Total Problems represent behaviors that cannot be isolated as either internal or external, it seems to follow that the strongest correlations might be found to exist between any and all the teacher intervention variables and the Total Problems T-score.

This contention regarding the Total Problems T-score is supported when examining the overall results found in Table 4.2. Across the five Factors correlated with Total Problems, four were found to be significant. The four found to be significant were indeed the strongest correlations when compared to the correlations found across the five Factors with either the Internalizing or Externalizing T-scores.

One additional comment is offered regarding the variables of Factor VI, Alter Classroom Physical Environment and the Total Problems T-score. Of the eight significant correlations shown in Table 4.2, six involved one or the other of these two variables. This would further strengthen the possibility that

teachers may be skilled in identifying inappropriate behaviors and implementing behavioral interventions, although the type of intervention implemented, as typified by the Factors identified by the BDRP Intervention Survey (Conoley & Peterson, 1986), are not necessarily consistent across time, situation, or intervention.

The remaining two significant correlations are worth some discussion at this time. These correlations are shown in Table 4.2. The first correlation discussed here is between Factor I, Redirection and Externalizing T-score. Then the correlation between Factor II, Consultation and the Internalizing T-score will be discussed.

Of particular note is the absolute dearth of significant correlation between Factor III, Manipulation of Material Reward and any type of student behavior. It would seem that with the emphasis in the literature given to interventions including some type of material reward (e.g. Witt & Elliott, 1982), that some correlation between behavior and material reward would be indicated as significant.

In summary of Table 4.2, five general issues become apparent. There is no particular importance to the order in which these issues are recapped. The first issue is that the Total Problems T-score shows correlations across four of the five identified interventions. Since the Total Problems T-score contains student behaviors that could not be isolated into external and internal behaviors, this is not all that surprising. The second issue of interest is that teachers report that they alter the classroom environment for any and all student behaviors. The third is that teachers do not use material rewards consistently for inappropriate student behaviors. The fourth is that teachers redirect student attention or change the classroom around when students

engage in the more aggressive, antisocial behaviors. Fifth is that those students considered to be withdrawn and fearful are either sent to consult with an expert or moved around in the room.

It would seem that several conditions might be a play resulting in these seemingly low correlations found in Question One. It might be that teachers merely reportedly incorrectly the student behavior or the frequency of a particular intervention. Even as teachers were asked to consider recent history in their reporting, specific aspects of an event may have considerable influence upon how a person remembers that event and the consequences of that event. Another possibility might be that the teachers did not understand the instructions and recorded nonfactual information. A third, and disturbing possibility, is that teachers actually have little consistency in the implementation of interventions with clearly identified inappropriate behavior. If this were the case, it would appear that teachers react to inappropriate behaviors with little forethought and planning. It would seem as though teachers respond to inappropriate behavior with whatever interventions come to mind.

Question 2

Is it possible to determine a pattern of teacher implemented interventions based on specific clusters of student behavior?

Question two requires the variables to be identified as either a criterion variable or a predictor variable. In this question, the criterion variable was the interventions Factors. These scores are discussed above. The predictor variable was the normalized T-scores derived from the CBC-TRF (Achenbach & Edelbrock, 1980) (also discussed above).

The analysis implemented for this question is multiple regression. The

specific regression analysis used in this question is full model regression. This analysis was selected in that it provided an acceptable method of accounting for shared variance of the variables for this exploratory study. In the full model regression method a block of independent variables is used to determine their usefulness as predictors. This is unlike the forward inclusion and backward elimination methods, which involve an established order of adding or removing variables from the model, and the true stepwise method, which reevaluates the unique contribution of each variable after the addition of each variable.

The following discussion refers to the working and statistical hypotheses for question two. The working hypothesis states that it is possible to predict the use of the intervention factors used by teachers based on the Internalizing, Externalizing, and Total Problems T-score of the CBC-TRF. The statistical hypotheses are as follows: the null hypothesis is that there is no difference between the Factor score and the full model regression of Internalizing, Externalizing, and Total Problems T-scores; the alternative hypothesis is that there is a difference between the Factor score and the regression of Internalizing, Externalizing, and Total Problems. The null and alternate hypothesis do not change across the five factors under investigation in this study.

Table 4.3

Correlation Matrix (n=76)

	Redirect	Consult	Manipulate	Remove	Alter	Internal	External	Total
Redirect	1.000	.441	.643	.519	.439	.235	.321	.344
Consult		1.000	.494	.608	.556	.320	.271	.351
Manipulate			1.000	.605	.330	.173	.058	.122
Remove				1.000	.412	.210	.279	.306
Alter					1.000	.356	.304	.366
Internal						1.000	.648	.809
External							1.000	.945
Total								1.000

An examination of the correlation matrix found in Table 4.3 indicates that the T-scores from the CBC-TRF are highly correlated: the Internalizing T-score and the Externalizing T-score correlation is .64; the Internalizing T-score and Total Problems T-score correlation is .809; and the Externalizing T-score and Total Problems T-score correlation is .945. In that the authors acknowledge that internalizing and externalizing behaviors are not necessarily mutually exclusive, and that the total problems score was an attempt to account for this overlap, a high correlation among these scores is not surprising.

Outside of the high correlations between the T-scores, the remaining correlations examine the zero-order correlations for the three predictor variables. For ease of discussion, the zero-order correlations of the three predictor variables will be discussed separately. The predictor variables, as described above, are the Total Problems T-score, the Internalizing T-score, and the Externalizing T-score.

Table 4.3 shows that Total Problems T-score has the highest zero-order correlation with Factor VI, Alter Classroom Physical Environment (r = .366) followed in turn by Factor II, Consultation (r = .351), Factor I, Redirection (r = .344), and Factor IV, Removal from Classroom (r = . 306). The remaining zero-order correlation with the Total Problems T-score was Factor III, Manipulation of Material Reward (r = .122).

In examining the zero-order correlation with the Internalizing T-scores, Factor VI, Alter Classroom Physical Environment (r = .356) is the strongest correlation. This is followed by Factor II, Consultation (r = .320). The remaining correlations drop rapidly after Factor II.

The last predictor variable in this question is the Externalizing T-score. As can be seen in table 4.3, the strongest zero-order correlation is with Factor I, Redirection (r = .321). Only one other correlation is above .3, and that is Factor VI, Alter Classroom Physical Environment (r = .304).

There is one particularly interesting correlation that could almost be overlooked in the visual analysis above. Factor III, Manipulation of Material Reward, has the weakest correlation with all three predictor variables. With the Externalizing T-score, a correlation was virtually nonexistent (r = .058), and only slightly stronger with the Internalizing T-score (r = .173) and the Total Problems T-score (r = .122).

Table 4.4

Analysis of Variance for the Full Model Regression of Factor I, Redirection, with the set of Internalizing, Externalizing, and Total Problems T-Scores.

Effect	df	SS	MS	F
Regression	3	7.066	2.355	3.540*
Residual	72	47.907	.665	

*p<.05

Table 4.5

Summary Table for the Full Model Regression of Factor I, Redirection, with the set of Internalizing, Externalizing, and Total Problems T-Scores

Variable	b	St. Error of b	t**	Sig. t
Total Problems	.067	.047	1.413	.162
Internalizing	-.019	.021	-.913	.364
Externalizing	-.028	.044	-.634	.528

** df for each t-test = 72

As can be seen in Table 4.4, the set of independent variables, the CBC-TRF T-scores, is a statistically significant predictor of Factor I, Redirection: $F(3,72) = 3.540$, $p < .05$. The contributions of each individual predictor variable are shown in Table 4.5. As can be seen, the contribution of no single predictor variable is significant.

Table 4.6

Analysis of Variance for the Full Model Regression of Factor II, Consultation, with the set of Internalizing, Externalizing, and Total Problems T-Scores.

Effect	df	SS	MS	F
Regression	3	7.007	2.336	4.620*
Residual	72	36.404	.506	

*p<.05

Table 4.7

Summary Table for the Full Model Regression of Factor II, Consultation, with the set of Internalizing, Externalizing, and Total Problems T-Scores

Variable	b	St. Error of b	t**	Sig. t
Total Problems	.087	.041	2.12	.038
Internalizing	-.010	.018	-.582	.562
Externalizing	-.066	.038	-1.719	.090

** df for each t-test = 72

As can be seen in Table 4.6, the set of independent variables, the CBC-TRF T-scores, is a statistically significant predictor of Factor II, Consultation: $F(3,72) = 4.620$, $p < .05$. The unique contributions of each individual predictor variable are shown in Table 4.7. As can be seen, only the contributions of the Total Problems score is considered to be significant.

Table 4.8

Analysis of Variance for the Full Model Regression of Factor III, Manipulation, with the set of Internalizing, Externalizing, and Total Problems T-Scores.

Effect	df	SS	MS	F
Regression	3	2.213	.738	1.146
Residual	72	46.367	.644	

Table 4.9

Summary Table for the Full Model Regression of Factor III, Manipulation, with the set of Internalizing, Externalizing, and Total Problems T-Scores

Variable	b	St. Error of b	t**	Sig. t
Total Problems	.041	.046	.893	.375
Internalizing	.005	.020	.252	.802
Externalizing	-.045	.043	-1.049	.298

** df for each t-test = 72

As can be seen in Table 4.8, the set of independent variables, the CBC-TRF T-scores, is not a statistically significant predictor of Factor III, Manipulation: $F(3,72) = 1.146$, $p > .05$. The contributions of each individual predictor variable are shown in Table 4.9. As can be seen, no single predictor contributes significantly.

Table 4.10

Analysis of Variance for the Full Model Regression of Factor IV, Removal, with the set of Internalizing, Externalizing, and Total Problems T-Scores.

Effect	df	SS	MS	F
Regression	3	1.380	.627	2.815*
Residual	72	16.028	.223	

*p<.05

Table 4.11

Summary Table for the Full Model Regression of Factor IV, Removal, with the set of Internalizing, Externalizing, and Total Problems T-Scores

Variable	b	St. Error of b	t*	Sig. t
Total Problems	.039	.027	1.431	.157
Internalizing	-.011	.012	-.917	.362
Externalizing	-.019	.025	-.762	.137

* df for each t-test = 72

As can be seen in Table 4.10, the set of independent variables, the CBC-TRF T-scores, is a statistically significant predictor of Factor IV, Removal : $F(3,72) = 2.815$, $p < .05$. The contributions of each individual predictor variable are shown in Table 4.11. As can be seen, no single predictor variable contributes significantly.

Table 4.12

Analysis of Variance for the Full Model Regression of Factor VI, Alter, with the set of Internalizing, Externalizing, and Total Problems T-Scores.

Effect	df	SS	MS	F
Regression	3	8.186	2.729	4.287*
Residual	72	45.832	.637	

*p<.05

Table 4.13

Summary Table for the Full Model Regression of Factor VI, Alter Classroom , with the set of Internalizing, Externalizing, and Total Problems T-Scores

Variable	b	St. Error of b	t*	Sig. t
Total Problems	.054	.046	1.161	.250
Internalizing	.005	.020	.272	.786
Externalizing	-.034	.043	-.785	.435

* df for each t-test = 72

As can be seen in Table 4.12, the set of independent variables, the CBC-TRF T-scores, is a statistically significant predictor of Factor VI, Alter Classroom Physical Environment: $F(3,72) = 4.287$, $p < .05$. The contributions of each individual predictor variable are shown in Table 4.13. As can be seen, no single predictor contribution is significant.

It would appear then, that in order to predict the use of teacher-selected interventions, the three T-scores from the CBC-TRF should be considered as a predictor set, or unit. Certainly, the individual T-scores were determined not to be useful as individual predictor variables. Considering the findings in Question One, in which half of the significant correlations involved the Total Problems T-score, it is surprising that not even the Total Problems T-score,

when considered individually, was a suitable predictor of teacher interventions.

A possible explanation for the difficulty of the individual T-scores in predicting the interventions is that the survey data may violate the statistical assumptions of the full model regression analysis, resulting in erroneous regression analysis. There are four assumptions constraining the use of the full model regression, three of which are robust to violation, and one of which is fairly sensitive to violation. The likelihood of violating the three robust assumptions is not great. These assumptions are linearity, homoscedasticity, and the scores are not random. The one assumption that is sensitive to violation is measurement error. It is possible that with the introduction of measurement error, the value of the correlation coefficient will decrease, negatively affecting the ability of the regression equation to make accurate predictions.

One additional possibility is that because the BDRP Intervention Survey (Conoley & Peterson, 1986) is a new instrument, it may need refinement or additional investigation as to its validity and reliability. With future investigations utilizing this instrument, refinement will occur.

Chapter Five: Discussion

Introduction

The purpose of this study was to examine possible relationships between student behavior and teacher interventions. To investigate these relationships, this exploratory study examined the relationships that exist between the frequency of actual interventions as reported by teachers in response to the misbehavior of specifically identified students in those teachers' classrooms.

Two research questions were investigated in this study. The first question was concerned with the correlation that exists between a specific identified student's behavior score and the teacher's report of which behavioral interventions that teacher implemented. The second question attempted to determine if a teacher's intervention could be predicted from the behavior of the student by using the full model regression formula.

In the first question, the results of the correlation analysis indicated no strong correlations between the intervention factors and the broad-band behavior T-scores. The strongest correlations tended to fall in the low positive correlation range. The strongest correlation reported was .37, with several correlations slightly weaker. Of the eight significant correlations found to exist with intervention factors, four of those correlations occurred with the Total Problems T-score.

In the second question, the findings of the full model regression analysis show that when the three broad-band T-scores are statistically combined and analyzed as one variable, that single variable tends to be a significant predictor of teacher interventions. Of the five interventions under investigation in this study, four of the five were predicted at a significant level

using the block of T-scores as one variable. The only intervention not predicted at a significant level in the full model regression analysis was Factor III, Manipulation of Material Reward.

Discussion

The overriding issue in this study seeks to determine whether or not the defining characteristics of student misbehavior have any influence on the interventions teachers select. The results of this frequency of intervention study seem to indicate that a weak case, at best, may be made that teachers select interventions based on identified student misbehaviors.

For example, teachers report that they attempt to redirect a child's behavior when intervening with children who score high with externalizing behaviors. Externalizing behaviors are those behaviors that are described by Achenbach and Edelbrock to be "aggressive, antisocial, [and] undercontrolled" (1983, p. 31). These responses by teachers are extremely interesting in that there is no support in the research for such an intervention for these behaviors.

Long and Newman (1980) suggest that interventions that may be considered redirective are the intervention of choice for students misbehaving in nonaggressive ways. Specifically, Long and Newman discuss that the redirective type behaviors are best utilized in situations that threaten the learning atmosphere. The results of this study, though not conclusive, seem to indicate that teachers use redirection for externalized behaviors, behaviors that go beyond a threat to the learning atmosphere and begin to threaten property and personal well-being.

MacMillan, Forness, and Trumbull (1973) propose that behavior change is based upon the success of the intervention. Although intervention efficacy

was not the focus of this study, it would appear that the effectiveness of redirection is at least somewhat suspect as an effective intervention for aggressive and antisocial students. Table 4.1 showed that teachers tend to use this particular intervention more often that other interventions, an average score of 3.5 on the five-point Likert scale.

Based on the findings in this exploratory study, it appears that teachers avoid direct confrontation with these aggressive and antisocial students and intervene by attempting to redirect the externalizing behaviors. In this time of increasing student violence reported by the news media, it would appear that avoidance of direct confrontation may be the only alternative teachers feel that they have when dealing with aggressive and antisocial students.

However, the possibility exists that teachers use redirection when they *anticipate* externalizing behavior, as well as experience it, thereby inflating the reported redirection frequency while not actually using redirection as the intervention for actual externalizing behaviors. Grossnickle and Sesko (1985) indicate that it is necessary to know the "causes or motivation" (p. 45) prior to intervening on a particular student misbehavior. If, indeed, teachers are anticipating the aggressive behaviors by understanding the cause or motivation of the misbehavior, and implementing the redirective intervention, then the extensive use of may be appropriate.

The remaining Factors, Factor II Consultation, Factor III Manipulation of material rewards, Factor IV Removal from the classroom, and Factor VI Alter the classroom physical environment, were implemented at a much reduced rate from that of redirection. The frequency of each of these factors were reported at less than two on the five-point Likert scale. Of these four, the most frequent reported factor was Factor VI Alter the classroom physical

environment, with a mean of 1.97, and the least frequently reported was Factor IV Removal from the classroom. Even though these interventions were reported to be utilized less frequently, they were (with the exception of Factor III Manipulation of material rewards) statistically predicted by the full model regression.

These interventions appear to be a more logical application of interventions than that of redirection. For example, consulting with others regarding a withdrawn student intuitively makes sense. Likewise, altering the physical classroom environment also seems a plausible intervention for the same child. Since these internalizing problems are of a less threatening nature to property and person, it is possible that teachers have more time to consider appropriate interventions. Wood (1991) would tend to support this position. Wood writes of a personal cost to teachers in terms of student behavior and the necessary intervention, with more aversive behaviors and interventions extracting a higher cost to the teacher personal comfort.

As these remaining interventions tend to be predicted by internalizing behaviors, teachers may be more inclined to respond to these behaviors in a logical manner. As Wood wrote in 1988, teachers select interventions based on principles, outcomes, and role/setting. Teachers may be more likely to understand, or at least think they understand, these less threatening behaviors.

Potential Applications

The purpose of this exploratory study was to examine relationships which may exist between student behavior and the use of teacher implemented interventions. If the likelihood of teachers applying a specific intervention can be determined for specific identified behaviors, implications

exist for classroom teachers, school administrators, and teacher trainers.

Classroom Teachers. This study could assist teachers in classroom management planning for students. Students with specific behavior characteristics could be assigned to teachers who frequently use specific intervention techniques. Classroom adaptations could also be developed to assist teachers in implementing these interventions.

Additionally, this study could contribute to teacher inservice training experiences for practicing teachers. Instruction and practice in frequently used intervention techniques could be incorporated into and/or emphasized in the curriculum of teacher preparation programs. These training and practice programs would enhance the identification of target behaviors, planning intervention strategies, and implementing appropriate activities. This training could be conducted through both preservice and inservice modes.

School Administrators and Teacher Trainers. This study should provide some assistance to school administrators and teacher trainers in developing training programs for current and prospective teachers. From among the possible applications of the results detailed in this study, this assistance to school administrators and teacher trainers might possibly take two forms:

1. Teachers will use, or are likely to use, only selected interventions in their classrooms (Witt & Martens, 1983 and Turco, Witt, & Elliott, 1984). Therefore, emphasis in teacher inservice and training programs should focus on those interventions used most frequently. By selecting this approach, teachers would have more time to thoroughly learn the most frequently implemented interventions. This form of training addresses the issues of: Is it a productive use of time for teachers and prospective teachers to receive training for which they are not likely to use?

2. Teachers don't use a wide variety of interventions in their classrooms (Witt, Moe, Gutkin, & Andrews, 1984). Since teachers apparently implement a limited repertoire of interventions, teacher trainers and schools administrators may desire to emphasize a more intensive, eclectic intervention training program in order to broaden the scope of behavioral interventions. Operating under this rationale, the issue is: Do teachers have sufficient breadth of training in the various interventions strategies in order to make an informed selection?

Implications for Further Research

Based on the findings and the discussion above, it would appear that the possibility does exist to use the CBC-TRF (Achenbach & Edelbrock, 1986) and the BDRP Intervention Survey (Conoley & Peterson, 1986) to predict the interventions teachers employ when students behave inappropriately in the classroom. These findings were based on teacher reports in which they indicated the frequency of their interventions for specific students. The subjects in this study were regular education teachers as they rated the behaviors of 76 students, of which about 40 percent were students with behavioral disorders and the remaining 60 percent were identified as having learning disabilities.

However, this finding is tenuous at best. As both the correlations and predictions from the full model regression are minimal, additional research is recommended. Replication of this study would serve to clarify these results. Whether confirmed or not, the results are too weak to be accepted without an additional investigation.

Also, additional work on the BDRP Intervention Survey (Conoley & Peterson, 1986) is warranted. This was the initial evaluation of the BDRP

Intervention Survey's validity and reliability. And although it was based on a valid and reliable instrument, the Classroom Intervention Profile (Martens, Peterson, Witt, & Cirone, 1986), the minor changes seem to have altered the strength of Classroom Intervention Profile somewhat.

Though this study did establish a certain tenuous relationship between student misbehavior and teacher interventions, opportunities for additional research exist outside of straightforward replication. Certainly the question remains unanswered as to the applicability of this study to the non-disabled student. For example, the Achenbach and Edelbrock series of behavior checklists are more appropriate for students frequently and consistently displaying inappropriate behavior. For the student not falling within this parameter, the Achenbach and Edelbrock may not be the most appropriate tool. This would be a weakness of most behavior checklists in that the purpose of such checklists is to classify behavior into manageable categories (Gresham, 1985).

A similar research design utilizing the CBC-TRF scores of non-disabled students might yield interesting results. If the CBC-TRF were able to classify the behavior of non-disabled students, a particular interest is the frequency with which teachers select redirection for the aggressive behavior of the non-disabled student. If, indeed, teachers are able to anticipate the disabled students aggressive behavior, will the teacher also anticipate the non-disabled student's misbehavior or will a different intervention be prevalent?

Similar to the non-disabled question, another area for additional research would be the other identified special education populations that were not investigated in this study. This study examined only those students with behavioral problems or identified learning disabilities. Other classifications

exist and the same question exists for these other populations.

The efficacy of interventions has been discussed in this study as this issue seem to have some impact on the selection of interventions (Martens, Peterson, Witt, & Cirone, 1986; Witt & Elliott, 1982; and Grossnickle & Sesko, 1985). In addition, the personal acceptability of interventions (Turco, Witt, & Elliott, 1985), the severity of student behavior and intervention options (Witt & Martens, 1983), and the effect of teacher experience on intervention selection (Witt, Moe, Gutkin, & Andrews 1984) have also been discussed. However, these issues were not investigated as an integral part of this study and research to include these issues would be of considerable interest.

Although the rationale for teacher intervention selection have been investigated, as mentioned above, these studies typically use case study as the methodology, unlike this study which used behavior checklists reporting on specific students. A study similar to this investigation that includes the efficacy and acceptability question might yield additional information as to why teachers so often use redirection.

To narrow the scope of some future research, a particular area from this study that warrants study is the non-significant findings of Factor III Manipulation of material rewards. In that some form of material rewards are at least mentioned in many of the collections of interventions presented in teacher training texts (e.g. Charles, 1989 or Good & Brophy, 1984), a major surprise was that no statistical significance was determined for any of the student behaviors in this study and Factor III.

Summary

This exploratory study found that a low correlation exists between student behaviors and the use of specifically identified and clustered teacher

interventions. As indicated in the literature, teacher acceptability of certain interventions issues may contribute to the low correlations reported. As reported by Witt and Martens (1983), the acceptability of interventions may intervene in the consistent application of interventions. Should teachers limit the range of their interventions based on acceptability issues identified previously, the possibility exists for a skewed picture to emerge regarding the application of interventions. It is possible that the strength of the correlations is depressed due to intervention acceptability, because as the experience of the teachers increases the range, or number of available interventions, decreases.

The use of Internalizing, Externalizing, and Total Problems T-scores from the CBC-TRF (Achenbach & Edelbrock, 1985) as predictors of teacher interventions were not well supported by the results of this study. As was shown in the results, only one of the predictor variable T-scores was shown to contribute significantly to the criterion variable. However, the T-scores, when considered as a single variable set, did predict the use of the interventions at an acceptable level. Therefore, it appears there may be value in using the CBC-TRF to predict the use of teacher selected interventions for inappropriate behaviors.

References

Achenbach, T. M. (1978). Psychopathology of childhood: Research problems and issues. Journal of Consulting and Clinical Psychology, 46, 759-776.

Achenbach, T. M., & Edelbrock, C. (1981). Child behavior checklist. Burlington, VT: University of Vermont

Achenbach, T. M., & Edelbrock, C. (1983). Manual for the child behavior checklist and revised child behavior profile. Burlington, VT: University of Vermont

Achenbach, T. M., & Edelbrock, C. (1985). Child behavior checklist-teacher report form. Burlington, VT: University of Vermont

Achenbach, T. M., & Edelbrock, C. (1986). Manual for the teacher's report form and teacher version of the child behavior profile. Burlington, VT: University of Vermont

American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.

American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders: Revised (3rd ed., rev.). Washington, DC: Author.

Borg, W. R., & Gall, M. D. (1983). Educational research: An introduction (4th ed.). New York: Longman

Billingsley, F. F. (1986). SIRS: Investigation of the relative efficacy of two response prompting techniques in the instruction of students with severe handicaps. Seattle, WA: Washington University. (ERIC Document Reproduction Service No. ED 309 612)

Brazil, N. R. (Not Dated). Teacher choices of disciplining inappropriate classroom Behavior. Unpublished manuscript.

Charles, C. M. (1989). Building classroom discipline: From models to practice

(3rd ed.). New York: Longman.

Christenson, S. L. (1992). Child behavior checklist. In J. J. Kramer & J. C. Conoley (Eds.), The eleventh mental measurements yearbook (pp. 164-165). Lincoln, NE: University of Nebraska Press.

Conoley, J. C., & Peterson, R. L. (1986). Behavior Disorders Research Project Intervention Survey. Unpublished survey.

Crocker, L., & Algina, J. (1986). Introduction to classical and modern test theory. New York: Holt, Rinehart, and Winston.

Edelbrock, C. (1983). Problems and issues in using rating scales to asess child personality and psychopathology. School Psychology Review, 12, 293-299.

Ellam, S. M., Rose, L. C., & Gallup, A. M. (1992). The 24th annual Gallup/Phi Delta Kappa poll of the public's attitudes toward the public schools. Phi Delta Kappan, 74(1), 41-53.

Elliott, S. N. & Busse, R. T. (1992). Child behavior checklist. In J. J. Kramer & J. C. Conoley (Eds.), The eleventh mental measurements yearbook (pp. 166-169). Lincoln, NE: University of Nebraska Press.

Elliott, S. N., Witt, J. C., Galvin, G. A., & Peterson, R. L. (1984). Acceptability of positive and reductive behavioral interventions: Factors that influence teachers' decisions. The Journal of School Psychology, 22, 353-360.

Gallup, A. M., & Elam, S. M. (1984). Gallup polls of attitudes toward education, 1969 - 1984. A topical summary. Bloomington, IN: Phi Delta Kappa. (ERIC Document Reproduction Service No. ED 252 573)

Good, T. L., & Brophy, J. E. (1978). Looking in classrooms (2nd ed.). New York: Harper & Row.

Gresham, F. M. (1985). Behavior disorder assessment: Conceptual,

definitional, and practical considerations. School Psychology Review, 14, 495-509.

Grossnickle, D. R., & Sesko, F. P. (1985). Promoting effective discipline in school and classroom: A practitioner's perspective. Reston, VA: National Association of Secondary School Principals. (ERIC Document Reproduction Service No. ED 266 550)

Hinkle, S. G., Wiersma, W., & Jurs, D. E. (1988). Applied statistics for the behavioral sciences (2nd ed.). Boston: Houghton Mifflin

Hollingshead, A. B. (1975). Four factor index of social status. Unpublished manuscript.

Johnson, L. J., & Pugach, M. C. (1991). Peer collaboration: Accommodating students with mild learning and behavior problems. Exceptional Children, 57, 454-461.

Long, N. J. & Newman, R. G. (1980). Managing surface behavior in children in school. In N. J. Long, W. Morse.& R. G. Newman (Eds.), Conflict in the Classroom (4th ed.). Belmont, CA: Wadsworth Pub. Co.

National Education Association. (1979). Nationwide Teacher Opinion Poll, 1979. Washington, D.C.: Author. (ERIC Document Reproduction Service No. ED 178 533)

Macmillan, D. L., Furness, S. R., & Trumbull, B. M. (1973). The role of punishment in the classroom. Exceptional Children, 40, 85-96.

Martens, B. K., Peterson, R. L., Witt, J., C., & Cirone, S. C. (1986). Teacher perceptions of school-based interventions. Exceptional Children, 53, 213-223.

Skinner, B. F. (1966). Operant behavior. In W. K. Honig (Ed.), Operant behavior: Areas of research and application. Appleton, Century, Crofts:

New York.

Turco, T. L., Witt, J. C., & Elliott, S. N. (1985). Factors influencing teachers' acceptability of classroom interventions for deviant student behavior. Programming for Adolescents with Behavioral Disorders, 46-53.

Walker, H. M. (1979). The acting-out child: Coping with classroom disruption. Allyn & Bacon: Boston.

Walker, J. E. & Shea, T. M. (1984). Behavior management: A practical approach for educators (3rd ed.). Times Mirror/Crosby: St. Louis.

Witt, J. C. & Elliott, S. N. (1982). The response cost lottery: A time efficient and effective classroom intervention. Journal of School Psychology, 20, 155-161.

Witt, J. C., Hannafin, M. J., & Martens, B. K. (1983). Home-based reinformcement: Behavioral covariation between academic performance and inappropriate behavior. Journal of School Psychology, 21, 337-348.

Witt, J. C. & Martens, B. K. (1983). Assessing the acceptability of behavioral interventions used in classrooms. Psychology in the Schools, 20, 510-517.

Witt, J. C., Moe, G., Gutkin, T. B., & Andrews, L. (1984). The effect of saying the same thing in different ways: The problem of language and jargon in school-based consultation. Journal of School Psychology, 22, 361-367.

Wood, F. H. (1991). Cost/benefit considerations in managing the behavior of students with emotional/behavioral disorders. Preventing School Failure, 35(2), 17-23.

Wood, F. H. (1988). Factors in intervention choice. In R. Rutherford (Ed.), Monograph in behavior disorders: Severe behavior disorders of children and youth (pp. 133-143). Reston, VA: Council for Exceptional Children.

Wood, F. H., & Hill, B. K. (1983). Aversiveness and frequency of use of

commonly used interventions for problem behavior. Monograph in behavior disorders: Severe behavior disorders of children and youth. (pp. 28-34), Reston, VA: Council for Exceptional Children.

Zabel, R. H., Peterson, R. L., Smith, C. R., & White, M. A. (1982). Availability and usefulness of assessment information for emotionally disabled students. School Psychology Review, 11, 433-437.

Appendix A

BDRP Intervention Survey

INTERVENTION SURVEY

Return to: Behavior Disorders Research Project, 250 Barkley Center, UNL, Lincoln, NE 68583-0732 (402)472-5982

Instructions: Please complete these questions for the most recent semester in which you had this individual as a student.

Type of classroom:
___ regular classroom. Specify grade: ___ and subject: _____
___ special education resource
___ specialized BD classroom or other special education
___ day program; hospital; agency or institutional

Your gender is: 1. female 2. male

Have you had training about childhood or adult depression? 1. Yes 2. No

Approximately how much time per week does/did this student spend in your classroom?

_____ average hours per week

During the current or appropriate school semester approximately how many days was this student absent from your class?

_____ days absent

How frequently does/did this student typically evidence behavior problems in your classroom or program?

Never	Rarely	Sometimes	Often	Continuously /Always
1	2	3	4	5

Compared to other typical students of the same age, would you say this student's ability to control his or her behavior is/was:

Very poor	Poor	Average	Good	Excellent
1	2	3	4	5

What is the total number of students you serve directly in your classroom or program at the present time (total direct service caseload all classes)?

_____ total students all classes

Among these students how many do you feel have behavior problems which require intervention?

_____ students with behavior problems

Among the students you serve, what number do you feel have a severe behavior disorder?

_____ students with severe behavior disorders

Among all of your students, how frequently do you typically experience behavior problems in your classroom or program?

Never	Rarely	Sometimes	Often	Continuously/Always
1	2	3	4	5

In the section below please indicate approximately how frequently you have employed each of the following interventions with regard to this student during the time you worked directly with this student:

	Never	Once/ year	Once/ month	Once/ week	Daily
Verbally cue, prompt or redirect student behavior	1	2	3	4	5
Verbally encourage desired behavior	1	2	3	4	5
Refer student for in-school suspension	1	2	3	4	5
Take away previously given material reinforcements, tokens, or points	1	2	3	4	5
Attempt to verbally increase student's interest in the desired task	1	2	3	4	5
Seek support or assistance regarding this student in person or over telephone from:					
School psychologist.	1	2	3	4	5
Special education director	1	2	3	4	5
Special education teachers	1	2	3	4	5
Principal	1	2	3	4	5
Classroom teachers	1	2	3	4	5
Guidance counselor	1	2	3	4	5
Reinforce student with materials, tokens, or points when the problem behavior is not occurring	1	2	3	4	5
Reinforce <u>another</u> student(s) who is behaving as desired with materials, tokens or points	1	2	3	4	5
Verbally promise reward for desired behavior	1	2	3	4	5
Develop a written contract promising specified rewards for desired behavior	1	2	3	4	5
Reinforce student with verbal praise when problem is not occurring	1	2	3	4	5
Verbally appeal to the student to change problem behavior	1	2	3	4	5

Require student to go to school office or place of detention	1	2	3	4	5
Require student to do time-out in special isolation room	1	2	3	4	5
Change physical environment of classroom by moving chairs, tables, screens, etc.	1	2	3	4	5
Change student's curriculum, assignments, and/or schedule	1	2	3	4	5
Change student's place in classroom	1	2	3	4	5
Change task assigned to student	1	2	3	4	5
Physically restrain, push, or hold student firmly	1	2	3	4	5
Verbally counsel or discuss problem behavior with student	1	2	3	4	5
Require parents to come to school and remove student (or send student home)	1	2	3	4	5
Ease or redirect problem through humor	1	2	3	4	5
Employ social skills training or instruction	1	2	3	4	5

For this student when he/she is in your class, please indicate the approximate percentage of instructional time spent in these categories:

Instruction in basic skills (reading & math) _____ %
Instruction in subject areas (history, science etc.) _____ %
Instruction in social skills and/or affective education _____ %
Instruction in vocational or pre-vocational skills _____ %
Instruction in self help or survival skills _____ %
Instruction in other areas _____ %
100 % TOTAL

Your current level of education is closest to:

Bachelors	BA+15	Masters	MA+15	MA+30 or more
1	2	3	4	5

Your total number of years of teaching experience (including this year) is:

_____ years

Your area(s) of teaching endorsement is(are):

Elementary	Secondary Subject(s)	Special Education BD	LD	Mild	Resource	Other
1	2	3	4	5	6	7

4

Has your district, building, or program designated one or more building-wide discipline or behavior management systems? If yes, to what extent has it been implemented? Please indicate below:

Name of Discipline program	Building wide program?		Exists in name only				Fully Implemented
Assertive discipline -Canter & Canter	yes	no	1	2	3	4	5
Reality therapy/ Control theory - Glasser	yes	no	1	2	3	4	5
Instructional Design Model (IDM) - Hunter	yes	no	1	2	3	4	5
Confronting Mistaken Goals - Dreikurs	yes	no	1	2	3	4	5
Cooperative Learning -Johnsons	yes	no	1	2	3	4	5
Other (specify): _____	yes	no	1	2	3	4	5

If this student has an individualized education program (IEP), rank the priorities for this student (1=Highest importance to 5=lowest importance) in terms of the program being provided for this student in school:

_____ unable to respond/don't know
_____ academic goals
_____ social/emotional/behavioral goals
_____ vocational/occupational goals
_____ life skills/ independent living goals
_____ other (specify) _____

Compared to other students, how would you rank the support provided by this student's family or guardians for the school's program?

No support /none	Minimal support	Average support	Good support	Complete support full cooperation
1	2	3	4	5

For what problem behaviors in this student, if any, have you designed specific behavioral plans?

None 1 Plans for the following behaviors: 2 _____
_____
_____

Are you aware of any <u>psychiatric diagnoses</u> assigned to this student?

1. Yes 2. No

If yes, specify: _____

Appendix B

Classroom Intervention Profile

ID # Nº 7313

Classroom Intervention Profile

Note: Do you work directly with students? Yes 1 No 2

If no, stop here and return this questionnaire in the enclosed envelope.

Directions: For each intervention listed below, circle the number of your response under each of the three categories (A, B, & C). Be sure to respond to all three categories for each intervention. For Column "C", use the past calendar year as a frame of reference. Please omit items which do not apply to your particular situation.

Interventions	A. Effectiveness: Not Effective 1	2	Partially Effective 3	4	Extremely Effective 5	B. Ease of Use: Extremely Difficult 1	2	Difficult 3	4	Average 5	Easy 6	Extremely Easy 7	C. Typical frequency of your use: Never 1	Once/Year 2	Once/Month 3	Once/Week 4	Daily 5
Section A																	
1. Seek support in person or over the telephone from:																	
a. guidance counselor	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
b. principal	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
c. special education teacher	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
d. classroom or subject teacher(s)	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
e. parent(s)	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
f. school psychologist	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
g. school social worker	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
h. psychiatrist or clinical psychologist	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
i. special education director or consultant	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
j. other (specify)_____	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
2. Touch student with positive intent	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
3. Require student to go to school office or place of detention	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
4. Physically restrain, push, or hold student firmly	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
5. Model desired behavior for student	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
6. Verbally threaten student with punishing consequences	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
7. Signal student to stop disturbing behavior using gesture or verbal alert	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
8. Refer student for in-school suspension	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
9. Verbally promise reward for desired behavior	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
10. Change task assigned to student	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
11. Move closer to student whose behavior is disturbing ("proximity control")	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5
12. Request police to come to school and remove student	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5

Continue on reverse

Page 2

Classroom Intervention Profile

ID #_____

Directions: For each intervention listed below, circle the number of your response under each of the three categories (A, B, & C). Be sure to respond to all three categories for each intervention. For Column "C", use the past calendar year as a frame of reference. Please omit items which do not apply to your particular situation.

Interventions	A. Effectiveness: Not Effective 1	2	Partially Effective 3	4	Extremely Effective 5	B. Ease of Use: Extremely Difficult 1	2	Difficult 3	4	Average 5	Easy 6	Extremely Easy 7	C. Typical frequency of your use: Never 1	Once/Year 2	Once/Month 3	Once/Week 4	Daily 5
Section A (continued)																	
13. Conduct a group discussion/ class meeting about the problem behavior	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
14. Require student to do time-out at present location in classroom	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
15. Permit problem to continue without responding directly ("planned ignoring")	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
16. Develop a written contract promising specified rewards for desired behavior	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
17. Attempt verbally to increase student's interest in the desired task	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
18. Change physical environment of classroom by moving chairs, tables, screens, etc.	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
19. Take away previously given material reinforcements, tokens, or points ("response cost")	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
20. Verbally recognize negative feelings inferred from observing student's behavior	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
21. Provide physical outlets/ tension release exercises or activities	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
22. Verbally counsel or discuss problem behavior with student(s) ("life space interview")	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
23. Change student's curriculum, assignments, and/or schedule	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
24. Require student to do timeout at special timeout area in the classroom	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
25. Require student to do timeout in special isolation room	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
26. Verbally encourage desired behavior ("pep talk")	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
27. Verbally cue, prompt, or redirect student behavior	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
28. Verbally praise behavior of another student who is behaving appropriately	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
29. Reinforce another student(s) who is behaving as desired with materials, tokens, or points	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5
30. Require parents to come to school and remove student (or send student home)	1	2	3	4	5	1	2	3	4	5			1	2	3	4	5

Continue on next page

Classroom Intervention Profile

ID #_____

Directions: For each intervention listed below, circle the number of your response under each of the three categories (A, B, & C). Be sure to respond to all three categories for each intervention. For Column "C", use the past calendar year as a frame of reference. Please omit items which do not apply to your particular situation.

Interventions	A. Effectiveness					B. Ease of Use					C. Typical frequency of your use				
	Not Effective 1	2	Partially Effective 3	4	Extremely Effective 5	Extremely Difficult 1	2	Difficult 3	Average 4	Easy 5	Extremely Easy	Never 1	Once/Year 2	Once/Month 3	Once/Week 4	Daily 5
Section A (continued)																
31. Paddle student on buttocks or legs (corporal punishment)	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
32. Reinforce the student with verbal praise when the problem behavior is not occurring	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
33. Reinforce the student with materials, tokens, or points when the problem behavior is not occurring	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
34. Verbally appeal to the student to change problem behavior	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
35. Vigorously shake student or tightly squeeze flesh (arm, ear, neck, etc.)	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
36. Ease tension verbally through humor	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
37. Take away objects, materials, etc., owned or in use by student	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
38. Verbally reprimand or criticize student's problem behavior	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
39. Provide verbal instruction to student on social skills and appropriate behavior	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
40. Verbally call attention to previously discussed rules, objectives, or expectations	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5
41. Change student's place in classroom	1	2	3	4	5	1	2	3	4	5		1	2	3	4	5

Section B

Please respond to each item by filling in the blank or circling the appropriate number.

1. What is the total number of students you serve directly in your classroom or program at the present time (total direct service caseload)? _____ Total students
2. Among these students how many do you feel have behavior problems which require intervention (regardless of whether/how the students are officially labeled)? _____ Students
3. Among the students you serve directly, what number do you feel have a severe behavior disorder? _____ Students
4. How many hours of aide time per week does your classroom or program receive? _____ Hours
5. Among the students you serve directly, how many (at present) are officially classified by a multidisciplinary team as being behaviorally disordered/emotionally disturbed? _____ BD/ED students
6. Your total number of complete years of teaching experience of all types is: _____ years
7. How frequently do you typically experience behavior problems in your classroom or program?

Never	Rarely	Sometimes	Often	Continuously/ Always
1	2	3	4	5

Continue on reverse

ID #_____

 Classroom Intervention Profile

Section B (continued)

8. Your sex is: Female 1 Male 2

9. Your level of education is closest to:

Bachelors	Bachelors plus 15 hours	Masters	Masters plus 30 hours	Masters plus 30 hours or more
1	2	3	4	5

10. What is the grade level of most of your students?

Preschool	Elementary	Junior High School	Senior High School
1	2	3	4

11. Which best describes your current teaching role? (Circle the appropriate number)

Classroom or subject area teacher	1
Special education resource teacher	2
Teacher of behaviorally impaired/emotionally disturbed	3
Teacher of mentally handicapped (EMH, DLP, TMR, etc.)	4
Other special education teacher	5
Other (specify)_____	6

12. Which best describes the environment in which you teach? (Circle the appropriate number)

Public school	1
Psychiatric hospital	2
Correctional facility	3
Residential school	4
Other day or residential school	5
Other (specify)_____	6

13. Do you expect to remain in your present profession 5 years from now? Yes 1 No 2

14. With respect to the children with whom you work, which of the following best describes your views concerning the primary cause of problem behavior? Their problem behavior is caused mostly by: (choose only one)

Factors within the child	1
Factors within the child's home	2
Factors within the classroom setting	3
Other (specify)_____	4

15. Do you currently hold a teaching endorsement in the area of behaviorally impaired/emotionally disturbed?

Yes 1 No 2

16. Would you like to receive a copy of the results of this survey? (If yes, your ID # will be used to obtain your address.)

Yes 1 No 2

Comments:

Thank you for your time and cooperation.

Return this completed questionnaire to: Reece L. Peterson
Department of Special Education
204 Barkley Center
University of Nebraska-Lincoln
Lincoln, NE 68583-0732

Appendix C

BDRP Intervention Survey Items by Factor*

Factor I

Model desired behavior for student

Move closer to student whose behavior is disturbing ("proximity control")

Attempt verbally to increase student's interest in the desired task

Verbally recognize negative feelings inferred from observing student's behavior

Verbally counsel or discuss problem behavior with student(s) ("life space interview")

Verbally encourage desired behavior ("pep talk")

Verbally cue, prompt, or redirect student behavior

Verbally praise behavior of another student who is behaving appropriately

Reinforce the student with verbal praise when the problem behavior is not occurring

Verbally appeal to the student to change problem behavior

Provide verbal instruction to student on social skills and appropriate behavior

Verbally call attention to previously discussed rules, objectives, or expectations

Factor II

Seek support in person or over the telephone from:

principal

special education teacher

classroom or subject teacher(s)

parent(s)

school psychologist

school social worker

psychiatrist or clinical psychologist

special education director or consultant

Factor III

Verbally promise reward for desired behavior

Develop a written contract promising specified rewards for desired behavior

Take away previously given material reinforcements, tokens, or points ("response cost")

Reinforce another student(s) who is behaving as desired with materials, tokens, or points

Reinforce the student with materials, tokens, or points when the problem behavior is not occurring

Factor IV

Seek support in person or over telephone from: guidance counselor

Require student to go to school office or place of detention

Refer student for in-school suspension

Require student to do timeout in special isolation room

Factor VI

Change physical environment of classroom by moving chairs, tables, screens, etc.

Change student's curriculum, assignments, and/or schedules

Change student's place in classroom

*Four items were on the BDRP Intervention Survey that were not on the Classroom Intervention Profile. They were: (1) Ease or redirect problem through humor; (2) Change task assigned to student; (3) Physically restrain, push, or hold student firmly; and (4) Require parents to come to school and remove student (or send student home). These items were excluded from the analyses used in this study.